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# Behaviors and beliefs of African American caregivers as related to their children's language-literacy development

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BEHAVIORS AND BELIEFS OF AFRICAN AMERICAN CAREGIVERS AS RELATED TO  
THEIR CHILDREN'S LANGUAGE-LITERACY DEVELOPMENT

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

in

The Department of Communication Sciences and Disorders

by  
Lekeitha Renee' Morris  
B.S., University of Central Arkansas, 2000  
M.S., University of Central Arkansas, 2002  
December 2010

## **DEDICATION**

This is dedicated to the memory of my daddy/uncle, James Willie Smith “Wiwe”  
Who taught me to never give up on my dreams and goals no matter what adversities I face.

Thank you for teaching me at an early age the importance of “Getting My Lesson.”  
Well Wiwe, I got my lesson and now the “School Girl” has completed her final degree.

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## **ABSTRACT**

This study examined African American (AA) caregivers' beliefs about their children's language-literacy development and their book reading behaviors with their children as a function of socioeconomic status (SES). Caregivers' behaviors were examined before, during, and after a three-day caregiver training program that targeted four behaviors (i.e., tracking print, reference to print, text to life, and interpretations). Participants were 20 caregiver-child dyads classified as Low-SES (LSES) or Middle-SES (MSES) based on the caregivers' level of education. Children were typically developing girls between the ages of four and five years.

At pre-test, the two groups of caregivers differed in some of their beliefs about children's language-literacy development. They also were similar in the length of their book reading sessions, in their use of tracking print, text to life, and reference to print behaviors, but the MSES group produced more interpretations and other book reading comments than the LSES group.

During training and at post-test, both groups increased the length of their book reading sessions and their use of all targeted behaviors. Nevertheless, the MSES group's book reading sessions were longer and they produced more target behaviors than the LSES group. The MSES group also incorporated more facilitative language behaviors that were not targeted in the training into their book reading sessions than the LSES group.

Correlations between the caregivers' behaviors and beliefs at pre-testing were positive but low in magnitude. Correlations were higher at post-test, but did not reach a level of statistical significance.

Findings demonstrate the appropriateness of book reading as a caregiver training target for AA caregivers because both groups were able to increase the length of their book reading sessions, and within these sessions, increase their ability to use a number of behaviors that are

known to facilitate child language-literacy development. Nevertheless, the findings show that variability exists within AA caregivers as a function of SES. This variability is related to some of their beliefs about children's language-literacy development and their ability to utilize training to enrich their book reading with their children. Clinicians should consider this variability when designing caregiver training programs for diverse groups of AA caregivers.

## **CHAPTER 1: INTRODUCTION**

Over the past decade, there has been a wealth of studies that have documented the negative effects of poverty on child development (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993; Duncan, & Brooks-Gunn; 2000; Hammer & Weiss, 1999; Hart & Risley, 1995; Mayer, 1997). As part of the effort to understand the effects of poverty on children's development, researchers have studied caregiver-child interactions to investigate the differences in the home environments of children from low- and middle-income families.

For example, Hart and Risley (1995) highlighted the differences that can be found in the linguistic environments of children who are reared in poverty as compared to the environments of children reared in working class or professional homes. Hart and Risley found that children in professional homes heard an average of 2,150 words per hour, children in working class families heard an average of 1,250 words per hour, and children in welfare homes heard an average of 620 words per hour. Further analysis of the data estimated that by the age of four, the average child from a professional home hears more than 45 million words and six verbal encouragements to every one discouragement. In contrast, the average four-year-old in a working class family hears 26 million words and two encouragements to every one discouragement. The average four-year-old reared in poverty hears only 13 million words and one verbal encouragement to every two discouragements.

Another example of variation across home environments of low- and middle-income families is illustrated by the results of The 1996 National Education Survey (National Center for Education Statistics, 1996). The survey identified a strong linear relationship between caregivers' education and the frequency of home reading with their preschool children. The survey reports that among caregivers with less than a high school education, only 59% reported reading three or more times per week with their children; the percentage was 77% among those with a high school diploma or GED, 87% among

those with some college, 91% among those with a college degree, and 96% among caregivers with a graduate or professional degree.

These types of findings have led to a growing interest in using the skills of speech-language pathologists to work with families from diverse sociocultural and economic backgrounds (Oetting, Pruitt, & Roy, 2006; Watkins, Lybolt, & Furey, 2002). Also, the American Speech-Language-Hearing Association (ASHA) position statement and tutorial on prevention encourages members of the profession to engage in specific actions in the area of prevention (ASHA; 1988; 1991). The 1991 ASHA position statement, in particular, states that training caregivers in facilitative language-literacy behaviors is one avenue by which speech-language pathologists can assist families. However, there are still several issues that need to be explored to guide caregiver training efforts. One of these relates to our knowledge about the attributes or characteristics of different groups of caregivers. Without adequate information about the caregivers we aim to serve, it is difficult to identify the behaviors and activities that should be included within caregiver training programs.

The current study addressed these issues by examining the behaviors and beliefs of caregivers during a shared book reading program with their preschool children. Both caregiver behaviors and beliefs are thought to be important to children's language-literacy development; however, their relationship to each other and their role in caregiver training remains unclear. Another unique feature of the study is that it focused on caregiver variability within the African American (AA) community. Few studies have focused on the variability that exists within AA caregivers, and even fewer have examined these caregivers' participation in caregiver training programs.

The literature review is organized into four sections. The first section provides the theoretical framework from which the paper is written. The second section reviews findings from previous studies of low- and middle-socioeconomic status (SES) caregivers when engaged in a shared book

reading activity with their children. One of the conclusions I draw from a review of this particular set of literature is that in much of the previous work, race has served as a confound, with the low SES (LSES) caregivers being AA and the middle SES (MSES) caregivers being European American (EA). Thus, there is a need to further examine the within-group variability that exists in AA caregivers.

The third section of the literature review presents information regarding caregiver language-literacy beliefs about their children, and the final section considers existing caregiver training programs. Within this section, information is provided about the specific caregiver behaviors that have been targeted in previous programs as well as the training methods that have been used within these studies.

Following the literature review, the independent and dependent variables of the study and the research questions are discussed. As will be detailed, the independent variables are SES and time. There are two levels of SES as defined by caregiver education and there are six levels of time (pre, post, delayed post and three probes). The dependent variables are the caregivers' behaviors with their children and their beliefs about their children's language-literacy development. Whenever an abbreviation is used, a full reference is provided upon first mention. In addition, all abbreviations used within this document are listed in Table 1.

Table 1

Abbreviations Used Within the Work

Abbreviation	Definition
AA	African American
ASQ	Ages and Stages Questionnaire
DELV	Diagnostic Evaluation of Language Variation-Screening Test
EA	European American
FK	Flesch-Kinkaid
FRE	Flesch Reading Ease
LSES	Low-Socioeconomic status
MAE	Mainstream American English
MSES	Middle Socioeconomic Status
SES	Socioeconomic Status

## CHAPTER 2: REVIEW OF LITERATURE

### Theoretical Framework

In the United States, MSES EA caregivers are the majority culture. Historically, families in the United States whose cultural backgrounds are different from that of this mainstream culture have been viewed as deficient. The deficit view has been applied to racial or ethnic minority families, LSES families, and families with limited English proficiency. Use of the deficit view has also led professionals to employ intervention strategies that are based on the interactive styles and views of mainstream caregivers. These approaches have been formalized in programs such as *INREAL* (Weiss, 1981) and the Hanen Program (Girolametto, 1988; Girolametto, Verby, & Tannock, 1994). As argued by van Kleeck (1994), a potential problem with these programs is that they may not be appropriate for families from different social classes or cultural backgrounds.

The current study was based on a sociocultural theoretical perspective of language-literacy development. This perspective views book reading practices as culturally defined. Given this, this perspective assumes that literacy practices of caregivers vary within cultures. Culture has been defined as the collective social customs and behaviors of organized groups of people. In the sociocultural perspective of language development, language acquisition is considered in its cultural context (Bronfenbrenner, 1979). Vygotsky's (1978) theory of social learning also proports that language develops as a result of children being active in their environment and through the interactions that occur between children and adults. By interacting with others, children not only learn to speak and use language in culturally appropriate ways, but language is also the avenue through which they are socialized into their community (Ochs & Schiefflin, 1984).

Although the current study was based in a sociocultural framework, the goal was not to compare AA caregivers to those of other groups of caregivers. Instead, the goal was to consider cultural differences within the AA caregiver population. Although many African Americans share



historical roots, they make up many different communities and experience a variety of social realities (Harris, Kamhi, & Polluck, 2001). In support of this statement, studies have shown that there are many variables that define a community including age, religion, geographic residence, social affiliations, and SES (Hammer, 2001; Hammer, Nimmo, Cohen, Draheim, & Johnson, 2005). Given this, the current study seeks to examine whether variability exists in AA caregivers' behaviors with their children and in their beliefs about child language-literacy development as a function of their SES.

### **AA Caregiver Language-Literacy Behaviors**

Although limited, some research has documented the behaviors of AA caregivers during book reading with their children; however this work has primarily focused on LSES AA caregivers (Anderson-Yockel & Haynes, 1994; Britto, Brooks-Gunn, & Griffin, 2006; Hammer et al., 2005; Pellegrini, Perlmutter, Galdo, & Brody, 1990; Roberts, Jergens, & Burchinal, 2005). A few of these studies are reviewed here.

In an effort to explore the behaviors of AA caregivers during book reading activities with their children, Pellegrini et al. (1990) studied 13 LSES caregiver-child dyads. The mean age of the participating children was 52 months and the caregivers' mean level of education was ~11 years. The researchers recorded nine reading sessions that took place in the home of each caregiver-child dyad. The caregivers' teaching strategies were coded as high, medium, or low demand strategies, and these levels indicated the mental demand that would be placed on the child if the strategy were employed by the caregiver. For example, low demand strategies included caregiver labeling or describing the pictures in the books whereas high demand strategies included caregivers asking the child to make cause-effect inferences about the book. The results revealed that the caregivers utilized all of the strategies during the book reading sessions with their children; however high demand strategies were utilized with the least frequency (low=31%; medium=49%; high=20%).

Hammer et al. (2005) also examined the behaviors of 10 LSES AA caregivers and found that the caregivers produced a low frequency of challenging/inferential questions (i.e. those that required the child to make predictions or that extended the story to the child's real life experiences) which would be characterized by Pellegrini et al. (1990) as a high demand strategy. Results showed that approximately half of the caregivers asked no more than one challenging/inferential question during their two book reading sessions.

Interestingly, Britto et al. (2006) studied 126 LSES AA caregivers, and their results showed variation in the caregivers' behaviors. The behaviors targeted by these authors were similar to those studied by Hammer et al. (2005) because they included maternal decontextualized language use (i.e., predictions, inferences, or text to life utterances) and labeling questions (i.e., questions that required the child to provide a label, or to point to a picture or word in the book). These behaviors were examined during a book reading activity and a puzzle activity.

For the book reading activity the results showed that the majority of the caregivers were Story-Readers (n = 90). These caregivers did not talk to their children during the book reading activity. Instead they read the book verbatim to their children with very little variation from the text. A much smaller group of caregivers (n=27) were Story-Tellers. These caregivers utilized an interactive discussion-oriented pattern of reading. These caregivers also used more decontextualized language, asked more labeling questions, gave their children more positive feedback, and demonstrated greater expressive language use compared to the Story-Readers.

For the puzzle activity, the results showed that the caregivers were classified into one of three groups based on their use of: verbal stimulation, encouragement, motivation, clarity of hints, flexibility of directions, and anticipation of the child's needs. Caregivers (n=35) in the first group were classified as Low Support and Low Teaching. This group of caregivers did not provide their children

with much assistance, support, or direct teaching during the puzzle activity. Caregivers (n=51) in the second group were classified as Support and Low Teaching. These caregivers provided their children support and encouragement to solve the puzzle, but they did not provide their children with direct teaching or guided assistance. Caregivers (n=30) in the third group were classified as Support and Teaching. These caregivers gave their children support and encouragement and guided their children's efforts to solve the puzzle with verbal and nonverbal cues. The results also showed that the mothers identified in the Low Support and Low Teaching group had lower receptive language and grade equivalency scores than the Support and Teaching group. Moreover, the Support and Low Teaching group had lower receptive language and were less likely to have graduated from high school than the Support and Teaching group.

When the researchers combined the caregiver reading and teaching patterns, children of Story-Tellers/Support and Teaching had higher school readiness skills than the other groups. The researchers also found that the children in the Story-Tellers/Support and Teaching and Story-Tellers/Support and Low Teaching groups demonstrated greater expressive language use compared to the children of the other groups of caregivers. These results suggest that preschoolers whose caregivers provide them with high levels of support and guided participation demonstrate greater school readiness and expressive language use when compared to children who received low levels of caregiver engagement.

Each of the previously reviewed studies focused on LSES AA caregivers. Two of the studies showed similar book reading traits among caregivers while the third showed variability. Two additional studies provide additional information about the behaviors that are seen in AA caregivers during book reading with their children. The first study by Anderson-Yockel and Haynes (1994) compared LSES AA and EA caregivers to each other whereas the second study by Haynes and

Saunders (1998) compared MSES AA and EA caregivers. I will discuss the results of each study and then combine the studies to compare the two groups of AA caregivers to each other.

In both studies, each caregiver-child dyad was given a book to read and asked to bring the child's favorite book to the session. The caregivers were then instructed to read to their children as they normally would at home. The caregivers' behaviors of interest included their use of: *-wh* questions, yes/no questions, directives, labeling, descriptions, feedback, attentional vocatives, attentional gestures, and pauses.

Anderson-Yockel and Haynes' (1994) results for the low-income AA and EA groups revealed no significant differences between the groups on 78% (7/9) of the variables. This finding suggests that the two groups were more similar than different. The two variables that were significantly different were the use of *-wh* questions and the use of yes/no questions. The EA caregivers' mean production of *-wh* questions was ~19 and their mean production of yes/no questions was ~14. The AA caregivers' mean production of *-wh* questions was ~5 and their mean production of yes/no questions was ~6. Interestingly, both of these behaviors would be classified by Pellegrini et al. (1990) as high demand strategies.

Haynes and Saunders' (1998) results for the MSES caregivers were somewhat similar to the results of the LSES caregivers because results revealed no significant differences between the middle-income groups on 89% (8/9) of the variables. The one variable that was significantly different was the groups' use of labeling. The EA caregivers labeled more items in the books when reading as compared to the AA caregivers. The EA caregivers' mean production of labeling was ~21 while the AA caregivers' mean production of labeling was ~7. According to Pellegrini et al. (1990) labeling would be considered a low demand strategy.

When examining the results across Anderson-Yockel and Haynes (1994) and Haynes and Saunders (1998), there are a couple of findings that require further discussion. For example, the results suggest that the differences in questioning patterns used by AA and EA caregivers may be confined to the lower SES groups, because the same pattern was not seen when MSES caregivers were used. In the MSES caregivers, the EA and AA caregivers mean production of *-wh* questions was ~19 and ~16 respectively, and their mean production of yes/no questions was ~25 and ~24, respectively. Also, as can be seen in Table 2, the MSES AA caregivers produced more questions (*-wh* and yes/no) than the LSES AA caregivers. One finding that is inconsistent with previous research is that the LSES AA caregivers utilized more labeling (~23 vs ~7) and description (~14 vs ~8) than did the MSES AA caregivers.

Table 2

Book Reading Behaviors of AA Caregivers During Shared Book Reading

Behaviors	Anderson-Yockel & Haynes (1994) LSES		Haynes & Saunders (1998) MSES	
	M	SD	M	SD
WH question	4.69	(7.41)	15.77	(13.57)
Y/N question	6.16	(8.92)	23.63	(16.64)
Labeling	22.93	(21.49)	6.78	(8.04)
Description	14.35	(16.04)	7.64	(13.02)
Pos. feedback	11.59	(19.97)	12.18	(16.96)
Neg. feedback	0.82	(2.16)	0.48	(0.75)
Attentional	21.28	(19.64)	17.33	(18.38)
Directive/request	9.19	(11.06)	8.48	(10.85)

Also as shown in Table 3, the two groups reported different amounts of daily reading to their children, with the LSES AA caregivers reading to their children less often than the middle-SES AA caregivers. Others have reported similar results regarding the low frequency at which LSES caregivers read to their children (Hammer, 2001). It is important to note; however that frequency of book reading was not statistically significant between the middle-income EA and AA caregivers. The only significant differences in the caregivers' self-reported book reading behaviors for the middle-income AA and EA caregivers was that the AA caregivers reported significantly fewer different types of books read per week and significantly fewer children's books in the home.

Table 3

AA Caregivers' Questionnaire Items Related to Book Reading Behaviors in the Home

Question	Anderson-Yockel & Haynes (1994) LSES		Haynes & Saunders(1998) MSES	
	M	SD	M	SD
#Reading times/week	2.8	.78	4.6	(.69)
#Different books read/week	2.7	.67	3	(.67)
#Different people reading books	2.4	1.42	2.5	(.85)
#Children's books in home	4.5	.97	4	(1.05)
Length average reading session	3.0	.66	3.6	(1.08)

Finally, Hammer and colleagues completed two studies that directly compared LSES and MSES AA caregivers to each other. First, Hammer and Weiss (1999) studied the language and play behaviors of six AA caregiver-child dyads from LSES backgrounds and six AA caregiver-child dyads from MSES backgrounds. The results showed that the caregivers in the LSES group were significantly more likely to initiate play episodes than the caregivers in the MSES group, but the MSES caregivers

were more likely to incorporate language goals during play episodes than the LSES caregivers (61% vs 36%). A wide range of variation also was observed in both groups. Dyads in the LSES group incorporated language goals during play 4% to 56% of the time whereas dyads in the MSES group included language goals between 19% and 81% of the time. Although this study did not examine the caregivers' book reading behaviors, the results demonstrate important differences between AA caregivers as a function of SES.

Next, Hammer (2001) examined low- and middle-SES caregivers' book reading behaviors. The results showed similarities and differences between the two groups. For example, the caregivers in both groups spent the same amount of time engaged in book reading during the sessions and they directed the same amount of speech toward their children. The caregivers in both groups also were observed to shorten their utterances and use a similar variety of words when talking about the books. However one caregiver in the MSES group averaged more words than the other caregivers because this caregiver typically read from the books word for word, which resulted in her using more complex utterances. The caregivers did not differ in their usage of nouns and verbs within their utterances. The caregivers in each group also produced similar percentages of statements, questions, responses to their children's vocalizations, and play-based utterances.

The author also observed three differences between the two AA groups. The LSES caregivers used significantly more directives than the MSES caregivers. Also, five of the caregivers in the MSES group reported reading daily to their children, whereas only two caregivers in the LSES group reported this behavior. Finally, the caregivers in the MSES group used more modifiers in their utterances than the LSES group. This result supports the finding of Hart and Risley (1995) who also found that middle-and upper-SES caregivers used more modifiers than LSES caregivers.

In summary, there has been limited research with AA caregivers. Of the seven studies reviewed here, three focused on LSES AA caregivers, two compared AA to EA caregivers, and two compared low- and middle-SES AA caregivers to each other. A total of seven studies with only two focusing on variability within AA caregivers reflect an extremely limited amount of data. Moreover, within these two later studies that examined individual differences within the AA community, the results were based on only 12 caregivers. Clearly, there is a need for more studies with more caregivers.

### **Relationship Between Caregivers' Behaviors and Beliefs**

“Beliefs consist of knowledge or ideas accepted by an individual as true or as probable answers to questions or facts” (Evans, Fox, Cremaso, & McKinnon, 2004: 131). Caregiver beliefs have been identified to play a significant role in caregiver-child interactions (Goodnow, 2002). Caregiver literacy beliefs have been thought to contribute to the variation seen in the quantity and quality of shared book reading (Baker & Scher, 2002; DeBaryshe, 1995; DeBaryshe, Binder, & Buell, 2000). In other words, research on caregiver language-literacy beliefs suggests that caregivers have varying beliefs about children’s early language-literacy development and that these beliefs contribute to caregiver-child interactions. Some of these studies are reviewed here.

Weigel, Martin, and Bennett (2006) examined 79 MSES EA caregivers’ beliefs about their preschool children’s literacy development. These researchers found that the caregivers’ beliefs placed them into one of two categories (facilitative vs conventional). The facilitative caregivers believed that by reading books to their children they were providing their children with many opportunities to learn vocabulary, knowledge, morals, communication, and life skills and that by taking an active role in teaching their children at home would result in better school outcomes. In comparison, the



conventional mothers believed that preschoolers were too young to learn about reading, and that teaching children was the responsibility of the school rather than the parents.

Results from the study also showed that the caregivers' literacy beliefs were related to their reported literacy practices and their children's literacy outcomes. For example, the homes of the facilitative caregivers tended to be more literacy enriching than the homes of the conventional caregivers. Also, the children of facilitative caregivers had more advanced print knowledge and were more interested in reading than the children of the conventional caregivers. Although all of the caregivers were from middle-SES backgrounds, the facilitative caregivers were more likely to report higher education levels and better grades in school than did the conventional caregivers.

Bingham (2007) also examined relationships among caregivers' literacy beliefs, the home literacy environment (e.g., the frequency of home literacy activities, visits to the library, etc.), the quality of caregiver-child book reading interactions (i.e., affective and instructional), and the children's development of pre-literacy skills. The results showed that the caregivers' literacy beliefs were positively related to the quality of the home literacy environment as well as the observable instructional and affective quality of caregivers' shared book reading interactions. The results further showed that the home literacy environment and the observable quality of shared book reading interactions were positively related to the children's development of early literacy skills. More specifically, the home literacy environment (characterized by the amount of books owned, frequency of reading, etc.) was an important predictor of the children's receptive language skills and emergent reading behaviors.

Ninety percent of the caregivers were EA and the majority had completed some college or trade school. It is important to note that although the caregivers were not extremely diverse in regard to their maternal educational level, a relationship between language-literacy behaviors and beliefs was

established. This is important because it further supports the idea that beliefs may be linked to self-reported and actual language-literacy behaviors, and changing caregivers' language-literacy beliefs may have an impact on how they promote literacy in the home.

To further examine the link between caregivers' behaviors and beliefs, Sonnenschein et al. (1997) asked 41 caregivers of preschoolers to identify the most effective way to help their preschool children learn to read. The researchers found that caregivers' literacy beliefs could be categorized into either a Skills Orientation or an Entertainment Orientation. The caregivers who adopted a Skills Orientation believed that reading was a basic skill that needed to be taught. These caregivers talked about the need to teach their children to read directly by reviewing flashcards or completing worksheets. Caregivers who adopted an Entertainment Orientation talked about reading to their children as a source of entertainment. These caregivers reported that their children read storybooks and engaged in play activities using printed matter. Furthermore, the researchers found that an Entertainment Orientation was generally predictive of early literacy competency in prekindergarten and kindergarten age children, whereas a Skills Orientation was not.

Each of the previously reviewed studies highlights the link between EA caregiver language-literacy beliefs and behaviors. Previous research with these EA caregivers indicates that their beliefs have an impact on how they engage their children in early literacy activities. Similar studies have not been conducted with AA caregivers. The current study attempted to fill this gap in the literature.

### **Training Programs**

The education of caregivers typically includes teaching them how to help their children develop language-literacy skills. Caregiver training programs also typically encourage caregivers to increase the frequency of their home language-literacy activities (Crain-Thoreson, Dahlin, & Powell, 2001; Hoff-Ginsberg, 1991) as well as the quality of their interactions (deJong & Leseman, 2001; Senechal,

LeFevre, Thomas, & Daley, 1998). The logic behind this training is that by targeting both areas (quantity and quality) one would typically see change in the children's receptive language skills, emergent reading behaviors, and concepts of print and letter knowledge.

Although most of the studies that will be reviewed in this section show that training caregivers in these two areas leads to change in caregiver behaviors, there continues to be gaps in the literature. One of these gaps relates to the minimal AA representation within these studies. For example, only 20% (10/51) of the dyads that have been studied were identified as AA.

Another gap in the literature is the lack of studies that have examined differences among the AA caregivers who have participated in these studies. With the exception of work done by Blom-Hoffman et al. (2006), the work that has been done that has focused on AA caregivers has been limited to caregivers from LSES backgrounds (Morgan & Goldstein, 2004; Oetting, Pruitt, & Roy, 2006). The current extends what we know about LSES and middle-SES AA caregivers while also providing information about within-group variability.

Another limitation of the existing literature is that some studies have focused on print referencing behaviors (Ezell & Justice, 2000; Justice & Ezell, 2000) while others have focused on decontextualized language strategies (Blom-Hoffman et al., 2006; Morgan & Goldstein, 2004). The current study examines both print referencing behaviors and decontextualized language strategies.

Consider first work completed by Ezell and Justice (2000). These researchers examined the extent to which video instruction influenced adults' verbal and nonverbal references to print while reading. The verbal behaviors included questions about print, requests about print, and comments about print whereas the nonverbal behaviors included tracking the print and pointing to print. The caregivers in the study were 24 adult-child dyads which consisted of speech-language pathology graduate students paired with typically developing four-year-olds as reading partners. The researchers

used a pretest-posttest control group design. Each adult participant in the experimental group viewed a seven-minute instructional video between the pre- and post-testing. The video showed the caregivers the five print referencing behaviors. The caregivers in the control group did not receive any training between the pre and post-testing sessions.

The results indicated that the experimental group used all five behaviors significantly more often than the control group at post-test. In addition, the proportion of the children's verbal utterances referring to print significantly increased for those children who were paired with the caregivers who had received the video instruction. In critique of this study, the adult caregivers were speech-language pathology graduate students. Given this, it is unknown as to whether these findings will generalize to low- and middle-SES AA caregivers.

Blom-Hoffman et al. (2006) also utilized videotape training to investigate caregivers' ability to use dialogic reading strategies with their young children. The caregivers included 18 caregiver-child dyads and, although six of the dyads were AA, their SES was not reported. The dyads were assigned to an experimental (N=10) or control (N=8) group. To gather baseline data, each dyad participated in a five-minute, videotaped observation in which caregivers were asked to read together with their children as they would do at home. Following the baseline assessment, the caregivers in the experimental group watched a 15-minute dialogic training video which included description and modeling of eight dialogic reading strategies. These strategies were: page prompts, attending statement, evaluating prompt, expanding prompt, repeat prompt, completion prompt, recall prompt, and distancing prompt. The caregivers in the experimental group also received a laminated handout and bookmark that highlighted and summarized key points in the video. The caregivers in the control group did not view the training video or the printed materials. Instead, they received a generic

bookmark that offered seven suggestions of things that parents and caregivers can do to facilitate their children's language development and secure attachment.

The second and third visits occurred approximately 6 and 12 weeks following the first visit. At each visit, a videotaped observation of the dyad was taken using the same procedures that were used at baseline. The results indicated that at 6 and 12 weeks, the caregivers in the experimental group used the targeted strategies more frequently than the caregivers in the control group. Although, the results suggest that the training was successful, one limitation of this work is that the researchers did not examine individual differences.

Unlike the first two studies reviewed which used only instructional video, Justice and Ezell (2000) used instructional video coupled with other training techniques to examine the efficacy of a home-based book reading intervention program for caregivers. The caregivers included 28 EA MSES dyads and their four-year-old typically developing children. The researchers used a pre-test/post-test control group design. The total training session for the experimental group lasted approximately 15 minutes. The training began with a seven-minute instructional video followed by review and modeling of each strategy. The video was the same one that was used in Ezell and Justice (2000). Caregivers were then asked to complete a practice session using the five behaviors with their children. During this session, the examiner provided feedback to the caregivers. After the training, caregivers were asked to implement the behaviors in their home on a daily basis and to use each strategy three times when reading a book. The caregivers in the control group were given the same reading schedule as the caregivers in the experimental group; however they did not receive the training session. After four weeks of home reading, the dyads returned to the lab for a post-testing session.

The results indicated that the caregivers in the experimental group showed a significant increase in their use of verbal and nonverbal references to print relative to the caregiver in the control

group. The children of the caregivers in the experimental group also outperformed the children of the caregivers in the control group in several areas of print and word awareness. Visual inspection of the data also indicated that the caregivers in the experimental group provided higher ratings to five of the six questions regarding their perception of their children's skills relative to the controls. The areas that caregivers in the experimental group rated higher than the controls included their children's ability to recognize simple words, alphabet knowledge, print concepts, interest in print and written language, and early literacy and language. Statistical analyses confirmed these group differences for two of the items (i.e., alphabet knowledge and print concepts). This study showed that the findings of Ezell and Justice generalize to caregivers however, the caregivers studied here were not AA. Moreover, the authors did not explore individual differences among the caregivers.

Morgan and Goldstein (2004) investigated the effects of teaching LSES caregivers to use decontextualized language during storybook reading. Decontextualized language reflected talk that was about the past, future, or imaginary events and was used to convey information to audiences who share limited information with the speaker or are removed from the physical context. The researchers used a multiple baseline design to evaluate the effectiveness of the training program. The caregivers included five caregiver-child dyads (four dyads were AA and one was EA). The training consisted of three separate lessons that focused on the decontextualized language strategies and weekly feedback. The strategies were: text to life utterances defined as comments and questions about the story used to make connections to the child's experiences, explanatory utterances (definitions and descriptions) and interpretation utterances (predictions and references to the characters' feelings and motivations). The training procedures used for each strategy consisted of five steps: (1) definition of each strategy, (2) observation of a videotape to illustrate examples of each strategy, (3) modeling by the researcher using a storybook, (4) practice with storybooks marked with sticky notes to encourage strategy use, and (5)

practice without cues. During each week of the intervention, the researchers provided feedback via the telephone on caregivers' use of the targeted strategies. Also, two of the five caregivers participated in a training that included a review of all three strategies and a demonstration of how to coordinate these strategies during storybook reading.

In order to assess maintenance of intervention effects, the dyads participated in a reading session one month post-intervention. In the sessions, all of the caregivers demonstrated use of all three decontextualized language strategies; however the three caregivers who did not participate in the additional training did not use all three strategies above criterion levels. The authors concluded that the additional training was important to show caregivers how to coordinate multiple strategies. The results further revealed that increased decontextualized language use by the caregivers was associated with increases in the children's use of decontextualized language. The children's rates of decontextualized language use tended to be lower than the caregivers' rate, but they roughly paralleled the caregiver's use. Furthermore, when the caregivers stopped using a particular strategy, their children demonstrated a parallel reduction. In critique of this study, the authors examined differences between the caregivers, but the differences were linked to the amount of training and not to the attributes of the caregivers. The current study examined differences that are related to the attributes of the caregivers.

Despite the results of these previous studies, one study has not generated positive results. Oetting, Pruitt, and Roy (2006) completed a study in which they evaluated the effectiveness of a caregiver training program that consisted of four one-hour workshops over a four-week period. The caregivers included seven LSES AA caregiver-child dyads, and dyads were assigned to an experimental group (N=4) or a control group (N=3) in which the caregivers attended workshops on nutrition. The researchers used a pretest-posttest control group design.

In the first workshop, the clinicians introduced terminology, discussed developmental milestones in speech and language, identified possible causes of delays, and described the role of speech-language pathologists. The second workshop introduced six different types of positive talking strategies and these included conversation starters, self-talk, repetition, revision, expansion, and sentence cloze. The importance of play and talking to children was also discussed during this session. The clinicians discussed and modeled how these strategies could be used during play. The caregivers were given the opportunity to practice these strategies using role-play. The focus of the third workshop was storytelling and reading and again the clinician discussed and modeled positive talking strategies. As part of this workshop, the clinicians discussed the importance of tracking print, pointing to pictures in books, and commenting on stories while reading. Caregivers also were instructed to role-play, and they generated and shared their own five-utterance story with a partner. The fourth workshop focused on enhancing children's language development through daily activities. The clinicians modeled how to utilize the positive talking strategies during everyday activities like dressing, snacks and bedtime.

The results revealed that the caregivers who participated in the experimental workshops rated their skills and knowledge level higher than the caregivers in the control group, but none of the caregivers changed their language-literacy behaviors when they interacted with their children.

There may be several reasons why the training of Oetting and colleagues (2006) was not consistent with previous studies. One possible explanation for the results is that this study was done using a group model in which there were about 15 caregivers who attended each workshop. All of the other studies reviewed presented training on an individual basis. Another component that was missing from this training was the use of practice and feedback. Although role-play was used during the



workshops, the caregivers were only verbally encouraged to practice the behaviors at home. In the other studies reviewed, practice was essential to the treatment and it was monitored.

In summary, five caregiver/adult training programs were reviewed and four of the five showed caregivers/adults to benefit from training. Unfortunately, and as mentioned earlier in this section, AA representation was minimal within these studies and within these none examined differences of the caregivers. One study examined individual differences, but those differences were related to the training as opposed to attributes of the caregivers. In order to adequately serve AA caregivers, we need to expand our knowledge about the characteristics of these caregivers.

The current study provides information about within-group variability of AA caregivers (low- and middle-SES). None of the previously reviewed programs included AA caregivers of low- and middle-SES. Morgan and Goldstein (2004) and Oetting et al. (2006) provide some information about LSES AA caregivers, however these two studies showed mixed findings and the literature still lacks information regarding middle-SES caregivers.

Different components from the previously reviewed programs guided the training of the proposed study. For example, instructional video has been used in other work and has been shown to be beneficial for training caregivers. The current study utilized instructional video as one component of the training program. Recall that the graduate students of Ezell and Justice (2000) who viewed the instructional video were able to use the five print referencing behaviors significantly more than the control group at post-test. Also recall that the caregivers in the experimental group of Justice and Ezell (2000) showed a significant increase in their use of print referencing behaviors. The training consisted of the instructional video, followed by a practice session in which the researcher provided feedback to the caregiver.

Two other methods of training that have been included in caregiver training programs have been the use of modeling (Blom-Hoffman et al. 2006; Justice & Ezell, 2000; Morgan & Goldstein, 2004; Oetting, Pruitt, & Roy, 2006) and caregiver practice (Hockenberger, Goldstein, & Haas, 1999; Justice & Ezell, 2000; Morgan & Goldstein, 2004). These two methods were also included in the training program implemented in the current work.

The current research focused on a total of five behaviors. Four of the behaviors including comments about print, tracking the print, interpretations, and text to life utterances were targeted in the training program and in addition to these, the other comments made during book reading were coded. The four behaviors were chosen based on previous research (Blom-Hoffman et al., 2006; Ezell & Justice, 2000; Justice & Ezell, 2000; Morgan & Goldstein, 2004; Oetting, Pruitt, & Roy, 2006) and the other comments made during book reading were examined to further explore what these caregivers were doing during book reading. The first two relate to print referencing behaviors and the others relate to decontextualized language.

### **Rationale for Current Study**

The current study examined caregivers' behaviors with their children and their beliefs about their children's language-literacy development during a caregiver training program. The current project also examined the link between the behaviors and beliefs of two groups of AA caregivers. The primary study had two independent variables which included group (LSES and MSES) and time (pre, post) and two sets of dependent variables which were the behaviors and beliefs of caregivers. For measures of the caregivers' behaviors, probes were also collected during training and approximately one week following the post-test.

## **Research Questions**

1. Are there differences in language-literacy beliefs of AA caregivers as a function of SES status?
2. Are there differences in the language-literacy behaviors of AA caregivers as a function of SES status?
3. Are there differences in the groups' use of behaviors within and following a caregiver training program as a function of SES status?
4. Is there a link between the caregivers' language-literacy behaviors and their language-literacy beliefs?

## **CHAPTER 3: METHODS**

### **Design**

This study utilized multiple designs to address the research questions. First, group comparisons were used to examine differences between the low-and middle-SES groups' behaviors and beliefs at pre-test. Then, group by time comparisons were used to examine differences between the two groups' use of the targeted behaviors as a function of participating in the caregiver training. Given that these comparisons involved a large amount of comparisons (two groups and six levels of time) rather than have 15 pairs of t-tests following the omnibus analyses, follow-up analyses were done strategically and decreased to only five pairs. The comparisons of interest were pre-testing behaviors to probe 1, pre-testing to probe 2, pre-testing to probe 3, pre-testing to post-testing and post-testing to delayed post-testing. For each of these comparisons, analysis of variance (ANOVA) was used. When ANOVAs were used the assumption of sphericity was tested and when it was not satisfied, statistics from the Greenhouse-Geisser row were used. Finally, correlation analyses were used to examine links between the caregivers' language-literacy behaviors and their language-literacy beliefs.

### **Caregivers**

Twenty-four African American caregiver-child dyads were recruited for the study (See Appendix A for the recruitment flyer). Two dyads completed the study but their data was excluded because the caregivers did not meet the inclusionary criteria (i.e., caregivers' had four years of education, but were receiving some form of federal assistance) and two dyads were excluded from participation because the children did not meet the inclusionary criteria (i.e, children were not typically developing). Therefore, the remaining 20 caregiver-child dyads served as the participants for the study.

The caregivers were recruited from three parishes in Southern Louisiana. Consent was obtained from each caregiver and was consistent with the university's Institutional Review Board (See Appendix B). The majority ( $n=17$ ) of the dyads resided in East Baton Rouge Parish where the census estimate of the population in 2009 was 434,633. Two dyads were residents of West Feliciana Parish and one lived in Ascension Parish. Census estimates of the populations for these two parishes were 15,055 and 104,822, respectively. The caregivers were recruited through flyers dispersed at local childcare facilities including head start centers and preschools as well as through personal community contacts. All of the caregiver-child dyads were from monolingual English-speaking homes. All of the caregivers reported that they attended regular education in school. See Table 4 for a detailed profile of the caregivers who participated in the study.

Caregiver education level served as the measure of SES. Researchers have reported that caregiver education is more stable than family income levels (Huston, McLoyd, & Garcia-Coll, 1994) and is easier to document than household income (Hauser, 1994). Initially, the caregivers classified as LSES were to be caregivers who had not completed high school and caregivers classified as MSES were to be caregivers with four or more years of college; however the criteria were modified because I was unable to recruit 10 caregivers who had not completed high school. Therefore, caregivers classified as LSES ( $n=11$ ) had completed no more than high school, received governmental assistance, and/or had a child who attended head start. Caregivers classified as MSES ( $n=9$ ) had completed two or more years of college, were not receiving governmental assistance, and had a child who did not attend head start.

The educational level of the caregivers in the LSES and MSES groups ranged from 9 to 12 years and 14 to 18 years, respectively. The two groups of caregivers differed significantly in their educational level  $F(1, 18) = 76.74, p < .001, \eta^2 = .81$ . The age of the caregivers in the LSES

and MSES groups ranged from 21 to 46 and 26 to 60, respectively. The two groups of caregivers differed significantly in their ages  $F(1, 18) = 6.35, p = .02, \eta^2 = .26$ . The MSES group included two grandmothers who were older than the other caregivers. One was 53 and the other was 60. When the analysis was run with these two caregivers excluded, the age difference between the two groups was no longer statistically significant  $F(1, 16) = 2.80, p = .11$ .

The participating children were between four- and five-years-old and were typically developing per parent report. The age of the children in the LSES and MSES groups ranged from 48 to 69 months and 49 to 66 months, respectively. The ages of the children in the two groups did not differ significantly,  $F(1, 18) = .00, p = .95$ . All of the children were required to pass an audiological screening bilaterally at 25 dB across 500, 1000, 2000, and 4000 Hz. Typical language development for the children was further confirmed by the *Diagnostic Evaluation of Language Variation (DELV)-Screening Test* (Seymour, Roeper, & de Villiers, 2003a) and the *Ages and Stages Questionnaire (ASQ)* (Squires, Potter, & Bricker, 1999).

The DELV (Seymour, Roeper, & de Villiers, 2003a), an individually administered language screening test was used to determine each child's language variation status and diagnostic risk status. The language variation section helps a clinician determine if a child's dialect reflects mainstream or nonmainstream English. A child can have a score that falls into one of three categories. The three categories are strong variation from Mainstream American English (MAE), some variation from MAE, and MAE. The children were included in the study regardless of their dialect status; however, of the 20 children studied here, 17 (85%) presented with strong variation from MAE and three in the MSES group (15%) presented as speaking MAE.

The diagnostic risk section of the screener helps a clinician determine a child's risk for a language disorder. For degree of risk for impairment, there are four categories and they are: Lowest

Risk, Low to Medium Risk, Medium to High Risk, and Highest Risk. Of these four categories, only the latter is interpreted by my university's clinic as indicating a language weakness that requires a full evaluation by a speech-language pathologist. Of the 20 children, 15 (75%) scored in the lowest risk category, four (20%) scored in the low to medium risk category, and one (5%) scored in the medium to high risk category. The performance of the children as measured by the diagnostic error score in the two groups did not differ significantly,  $F(1, 18) = 3.61, p = .07$ .

The ASQ (Squires, Potter, & Bricker, 1999) contains 30 items divided into five subtests (communication, gross motor, fine motor, problem solving, and personal-social aspects of language), and the composite reflects the child's average across the subtests. See Table 5 for the children's data for this tool. The tool is appropriate for children up to the age of 60 months and was given to all but seven children who were older than 62 months. For the child 60 months or younger, a composite of 40 or higher (out of 60) for communication is considered within the normal range. All children scored within the normal range and this included the one child who scored in the medium to high risk category on the DELV. After a Bonferonni correction was applied to correct for multiple F tests, an alpha level of .01 was used. Using the corrected alpha level, significant differences were not found between the two groups on the total score of the ASQ  $F(1, 11) = 5.16, p = .04$  or on the five subtests: communication  $F(1, 11) = .12, p = .74$ , fine motor  $F(1, 11) = 6.19, p = .03$ , problem solving  $F(1, 11) = .98, p = .34$ , personal social  $F(1, 11) = .85, p = .37$ .

In order to assess the stability of the caregivers' behaviors prior to the training, four caregivers from the LSES group and five caregivers from the MSES group participated in an additional pre-testing session. As can be seen in Table 6, the means and ranges of these caregivers' educational levels, ages, and their children's ages were visually comparable to the larger groups of LSES and MSES caregivers.

Table 4

## Profile of Caregivers

Number	Caregiver age in years	Caregiver educational level in years	Child's Care Center	Child's age in months	DELV Varia- tion	DELV Risk for Impairment
<b>LSSES</b>						
110	29	12	Preschool	54	Strong	Low-Medium
111	31	12	Head Start	55	Strong	Lowest
112	28	11	Kindergarten	67	Strong	Lowest
113	23	12	Head Start	55	Strong	Low-Medium
114	30	9	Kindergarten	69	Strong	Lowest
115	40	10	Head Start	51	Strong	Lowest
116	30	12	Home	58	Strong	Lowest
118	33	12	Head Start	57	Strong	Medium-High
119	46	12	Kindergarten	69	Strong	Lowest
120	21	12	Head Start	48	Strong	Lowest
121	27	12	Kindergarten	64	Strong	Lowest
Mean (SD)	30.73 (7.10)	11.36 (1.03)		58.82 (7.32)		
<b>MSES</b>						
210	36	18	Preschool	49	Strong	Lowest
211	39	18	Preschool	52	Main	Lowest
213	26	14	Preschool	58	Strong	Lowest
214	30	18	Preschool	58	Strong	Lowest
215	42	16	Kindergarten	65	Strong	Low-Medium
218	39	18	Kindergarten	65	Main	Lowest
219	60	18	Kindergarten	62	Strong	Low-Medium
220	53	14	Preschool	56	Strong	Lowest
221	40	18	Kindergarten	66	Main	Lowest
Mean (SD)	40.67 (10.50)	16.89 (1.76)		59.00 (6.02)		



Table 5

## Profile of Children's Ages and Stages Data

Number	Total	Communication	Gross Motor	Fine Motor	Problem Solving	Personal-Social
<b>LSES</b>						
110	300	60	60	60	60	60
111	295	60	60	60	60	55
113	290	60	60	55	55	60
115	265	60	60	35	50	60
116	230	60	60	20	30	60
118	270	50	60	40	60	60
120	265	60	60	25	60	60
Mean	273.57	58.57	60	42.14	53.57	59.29
(SD)	(24.10)	(3.78)	(.00)	(16.55)	(11.07)	(1.89)
<b>MSES</b>						
210	300	60	60	60	60	60
211	300	60	60	60	60	60
213	300	60	60	60	60	60
214	300	60	60	60	60	60
219	295	55	60	60	60	60
220	285	60	60	55	50	60
Mean	296.67	59.17	60	59.17	58.33	60
(SD)	(6.06)	(2.04)	(.00)	(2.04)	(4.08)	(.00)

Table 6

## Subsample of Caregivers Compared to All Caregivers

Group	All caregivers	Subsample of Caregivers
<b>LSES</b>		
Educational Level	11.36 (1.03) 9-12	12.00 (.00)
Caregiver Age	30.73 (7.10) 21-46	31.75 (10.69) 21-46
Child Age	58.82 (7.32) 48-69	59.50 (9.11) 48-69
<b>MSES</b>		
Educational Level	16.89 (1.76) 14-18	16.80 (1.79) 14-18
Caregiver Age	40.67 (10.50) 26-60	40.67 (10.50) 26-60
Child Age	59.00 (6.02) 49-66	59.00 (6.02) 49-66

## **Materials**

Materials included children's books, a pamphlet, and a video training tape.

**Children's Books.** A total of 13 children's books were used throughout the course of the study. Seven of the books were used during the training program. Six books were given to the families to practice the targeted behaviors at home. All thirteen books featured narrative picture books. To evaluate the readability of these books, two excerpts from each book were subjected to two analyses, the Flesch-Kincaid (FK) Score, and the Flesch Reading Ease (FRE) Score. The FK score is equivalent to the grade level of the text and the FRE score maps to a scale of 0-100. A FRE score of 100 means that a text is very easy to read whereas a FRE score of 0 means it is very difficult to read. For each book, scores from each excerpt were averaged together (See Appendix C). The range of the average FK grade level was 3.2 to 6.3 and the range of the average FRE score was 74.5 to 87.5. Based on these analyses, the books were considered to be appropriate to use with these caregivers.

**Pamphlet.** A pamphlet which consisted of a written definition of each behavior and two written examples was used as a way to introduce and/or review each behavior before the training session began. (See Appendix D).

**Training Video.** A four-minute edited training video entitled, "Enhancing caregiver reading behaviors during shared book reading" was shown on a Memorex 7 inch portable DVD player. For each of the behaviors targeted in the video, a definition of the behavior was followed by three different brief vignettes in which an adult was depicted using the target behavior during shared book reading with a preschool child. The four behaviors that were targeted included text to life utterances, interpretations, references to print, and tracking print. Text to life utterances included comments and questions about the story used by the caregiver to make connections to the child's experiences (Hammer et al., 2005; van Kleeck et al., 1997). Interpretations were utterances in which caregivers

asked the child to make predictions or required the child to make inferences about the story.

References to print included any comments, questions, or requests about print. For example, for tracking the print, three different vignettes showed an adult pointing to the text as she was reading. Caregivers were allowed to ask questions during this training session.

**Modeling.** The researcher modeled the use of the behaviors with the child for the caregiver and this session lasted approximately 15 minutes. During the modeling session, the researcher provided an example of each targeted behavior at least three times while reading the book with the child. A script and sticky notes were used throughout the story to ensure the same behaviors and examples were demonstrated for each caregiver-child dyad. Caregivers were allowed to ask questions during the modeling session.

**Practice with Feedback.** Each caregiver was asked to engage her child in a book reading session using the behaviors that were being targeted. The interaction was videotaped. After the caregiver finished reading the book to her child, the researcher and the caregiver watched the videotape and verbal feedback was provided to the caregiver. The researcher utilized a script and sticky notes during the story to ensure the same examples were provided to each caregiver. If a caregiver utilized the strategy on a page that the researcher would have used, the caregiver's use of the strategy was complimented. Caregivers were allowed to ask questions during this session as well.

### **Measures of Beliefs and Behaviors**

**Caregiver's Reading Behaviors.** The caregivers' use of four targeted behaviors and other book reading comments was examined at pre, post, delayed-post, and at the end of each training session through collection and analysis of a shared book reading session. The behaviors chosen came from previous research (Blom-Hoffman et al., 2006; Ezell & Justice, 2000; Morgan & Goldstein, 2004; Oetting et al., 2006). The four behaviors included: text to life utterances, interpretations, references to

print, and tracking print. The name of each behavior being targeted and an example is provided in Table 7. The number of times the caregivers used the targeted behaviors when reading with their child was determined.

Table 7

Targeted Behaviors

Behavior	Example
Text to life utterances	You have a dog at home.
Interpretations	What do you think is going to happen next?
Reference to print	This word says “dog.”
Tracking the print	Adult runs finger under the words when reading.

**Caregiver Literacy Beliefs.** The caregiver literacy beliefs were assessed using a 22-item questionnaire (Bingham, 2007). (See Appendix E). This questionnaire was chosen because all of the items are related specifically to language-literacy beliefs and other surveys used in previous research have assessed global beliefs and knowledge about child development. Bingham generated the items from previous qualitative and quantitative literacy beliefs research (DeBaryshe & Binder, 1994; DeBaryshe et al., 2000; Evans et al., 2004). Ten of the items represent the caregivers’ beliefs about the most effective ways to share books with their children and 12 of the items represent the caregivers’ beliefs about how children acquire literacy in the home environment. The caregivers rated the degree to which they endorsed each item on a six-point Likert-type scale, ranging from 1 (strongly disagree) to 6 (strongly agree).

Caregivers’ literacy beliefs were also assessed using the Parental Reading Belief Inventory (PRBI; DeBaryshe & Binder, 1994). This 32-item questionnaire was used to measure the extent to

which caregivers agreed or disagreed with a number of literacy beliefs. Caregivers rated each item on a 5-point Likert scale with 1 representing strongly disagree and 5 representing strongly agree (Weigel, Martin, & Bennett, 2006). The items represent caregivers' roles as teachers of school-related skills, positive affect associated with reading, the appropriateness of direct reading instruction, whether children acquire knowledge from books, whether limited resources are an obstacle to reading, and the flexibility of language development. This questionnaire has also been used in previous research and has been shown to have the potential to examine individual differences. In previous work this questionnaire was used to divide caregivers into two different categories (facilitative vs conventional) based on their beliefs about literacy development. (See Appendix F).

**Caregiver Perceptions of Training.** A rating profile was used to gather information regarding the caregivers' perceptions of the training. The nine-item, rating profile was given to each caregiver at their post-testing session. Caregivers were asked to respond to the items using a Likert-type scale of 1 (strongly disagree) to 5 (strongly agree). (See Appendix G).

## **Procedures**

Each dyad was seen for seven or eight sessions depending on if the dyad participated in two pre-testing sessions or not. Outlined below are the components of each of these sessions. All pre-, post, and delayed post-test reading sessions and the training sessions were conducted in the homes of the families unless they preferred to meet elsewhere. Of the 149 visits, 87% (130) of the sessions were done in the homes of the families, 7% (11) were completed at the university clinic and 5% (8) were completed at a public library in East Baton Rouge Parish. Only the caregiver-child book reading portions of the pre-testing, post-testing, delayed post-testing, daily probes, and the practice were recorded. When recording, two recording devices were used to adequately capture the targeted behaviors. They were a JVC Everio Camcorder and an RCA Digital Audio Recorder. The audio

recorder was placed beside the dyad to capture all spoken language produced by the dyad. The camcorder was held by the researcher and the researcher recorded from over the shoulder of the caregiver to capture the caregivers' tracking behaviors.

In the first session, the eligibility assessment was conducted. The eligibility session included the audiological screening, the administration of the *DELV-Screening Test* (Seymour, Roeper, & de Villiers, 2003a) and the *ASQ* (Squires, Potter, & Bricker, 1999) if appropriate.

During the second session, a caregiver-child shared reading session was completed which served as the pre-testing session. Caregivers were provided the books *The Sleepy Owl* (Pfister, 1986), *Toot and Puddle: Charming Opal* (Hobbie, 2003) and *Groundhog Stays Up Late* (Cuyler, 2005), and were asked to read the books as they normally would read with their children. The shared book reading was recorded. The caregivers who only completed one pre-testing session were then asked to complete two questionnaires to examine their language-literacy beliefs. Caregivers who completed two pre-testing sessions were asked to do another reading of the three books on a different day before they completed the two questionnaires.

To begin the training program each caregiver received an orientation and a reading schedule. During the orientation, the importance of reading was explained and caregivers were told that there are behaviors they can use to increase the benefits of shared reading with their children. A script was used to ensure the same information was provided to each caregiver. Following the orientation, the pamphlet was reviewed with the caregivers. Following this, the caregiver was asked to watch the videotape. At the end of the training, a daily probe was completed. The probe consisted of a caregiver-child shared book reading activity using the book *Pet Show* (Keats, 1972). For the probe, the researcher asked the caregiver to utilize the behaviors that were taught during the training. After the probe, each caregiver was given two books. The caregivers were asked to read the two books two

times over the next day while practicing the four behaviors (for a total of 2 reading sessions over a 1 day period, with each session including the reading of the two books).

The activities of the next two sessions followed those of the previous session except the training consisted of modeling for the third session and practice with feedback for the fourth session instead of the video that was used in the first session. At the end of both sessions, a daily probe using the book *Pet Show* (Keats, 1972) was administered and caregivers were instructed to read the two books two times over the next day while practicing the behaviors being targeted.

The next session consisted of the post-testing. During this visit, post-testing was completed using the same three books that were used for pre-testing and the post-testing was audio and video-recorded. Following the post-testing session, the caregivers were asked to complete the rating profile.

The final session consisted of the delayed post-testing using the book, *Goodnight Pippin*, (Goodman, 1986). Caregivers were asked to read to their children utilizing the behaviors that had been taught during the training. This book was different from the books that were used in the pre-testing and post-testing sessions and it was not one of the books given for practice. This session was audio and video recorded.

Table 8 presents the individual time frames of each session for each caregiver in the LSES and MSES groups. The information in the table is the time between one session and the next in days. A zero represents sessions done consecutively. As can be seen for most (n=15) of the dyads, the post-testing session took place one day after the third probe and for most (n=12) of the dyads, the delayed post-testing session took place one week after the post-testing session. As initially planned, most of the training sessions and the post-testing sessions were completed consecutively, and there was approximately a week between the post-testing session and the delayed post-testing session.



Table 8

Time Between Each Session for LSES and MSES Group

Number	Pre- Testing 1 and Pre- Testing 2	Pre- Testing 2 and Probe 1	Probe 1 and Probe 2	Probe 2 and Probe 3	Probe 3 and Post	Post and Delayed Post
<b>LSES</b>						
110	N/A	2	0	0	0	7
111	N/A	17	0	0	0	6
112	N/A	5	0	0	0	10
113	N/A	5	0	0	5	5
114	N/A	27	0	0	0	6
115	N/A	0	0	0	0	6
116	N/A	0	0	0	0	6
118	1	18	0	0	0	6
119	1	4	0	0	0	5
120	0	4	0	0	0	6
121	0	4	0	0	0	6
Mean	.50 (.58)	7.82 (8.78)	0 (0)	0 (0)	.45 (1.51)	6.27 (1.35)
<b>MSES</b>						
Number	Pre-Testing 1 and Pre-Testing 2	Pre-Testing 2 and Probe 1	Probe 1 and Probe 2	Probe 2 and Probe 3	Probe 3 and Post	Post and Delayed Post
210	N/A	9	0	0	0	5
211	N/A	7	0	1	3	6
213	N/A	4	0	0	0	5
214	N/A	6	0	0	0	6
215	5	1	0	0	2	6
218	7	7	0	0	0	6
220	0	5	1	0	3	6
219	7	13	0	0	0	10
221	5	4	0	1	6	15
Mean	4.80 (2.86)	6.22 (3.42)	.11 (.33)	.22 (.44)	1.56 (2.13)	7.22 (3.27)

### Data Coding

The caregivers' responses to the two questionnaires were independently entered into SPSS and discrepancies were resolved through consensus. The caregiver-child reading sessions that took place at pre-, post-, delayed post-testing, and daily book reading probes were transcribed verbatim using the

Systematic Analysis of Language Samples (SALT; Miller & Iglesias, 2006). The books were transcribed at the sentence level using the sentences in the books as a guide. (See Appendix H and I). A set of coding definitions including tracking print [tr], references to print [rp], text to life utterances [ttl], and interpretations [int] was developed to identify occurrences of the caregivers' use of the four targeted behaviors. Other comments made during book reading [obc] were also coded. Reference to print and other book reading comments were further coded to explore behaviors used by this population.

Each sample was transcribed using the audiotape. After the initial transcription, the audio recording was listened to again to check the transcription for accuracy. A graduate students in speech-language pathology also listened to all (n=129) of the audio samples a third time for transcription accuracy. Disagreements were resolved through consensus. On the fourth pass, the video tape of the session was watched to code each transcript for the targeted behaviors. From the transcriptions, the number of times the caregivers produced the targeted behaviors were determined using the explore option in SALT.

### **Reliability**

Twelve sessions were used to examine reliability of coding the four behaviors and other book reading comments. A graduate student in speech-language pathology was trained and was given 10% of the video samples and she independently coded the samples for the four targeted behaviors and any other book reading comments made by the caregivers. The total percent of agreement was calculated for each code by dividing the total number of agreements by the total number of opportunities for agreement and multiplying by 100. For tracking print, there were 553 (98%; range = 97-100) agreements out of a total of 562 opportunities for agreement. For reference to print, there were 175 (95%; range = 92-100) agreements out of a total of 185 opportunities for agreement. For text to life

utterances, there were 98 (95%; range = 90-100) agreements out of a total of 103 opportunities for agreement. For interpretations, there were 91 (91%; range = 87-100) agreements out of a total of 100 opportunities for agreement. For other book reading comments, there were 872 (97%; range = 88-100) agreements out of a total of 898 opportunities for agreement.

## CHAPTER 4: RESULTS

### Questionnaires

On the Caregiver Literacy Beliefs questionnaire, three scores were examined, the total score and two sub-category scores, which reflected the caregivers' ideas about the most effective ways to share books with their children (10 items) and the caregivers' ideas about how children acquire literacy in the home environment (12 items). Table 9 provides the means, standard deviations, and ranges for the items on the questionnaire. Significant differences were found between the two groups on the total score of the questionnaire  $F(1, 18) = 5.21, p = .04$ , eta squared = .28 and on the sub-category that measured caregivers' beliefs about how children acquire literacy in the home environment:  $F(1, 18) = 5.17, p = .04$ , eta squared = .22; but not on the sub-category that measured caregivers' beliefs about the most effective ways to share books with their children,  $F(1, 18) = 4.42, p = .05$ . Significant group differences reflected higher scores for the MSES group as compared to the LSES group.

Table 9

Descriptive Data for Caregiver Literacy Beliefs Questionnaire

Group	Total	Most effective ways to share books	How children acquire literacy
	M (SD) Range	M (SD) Range	M (SD) Range
LSES	113 (14.19) 90-132	50.09 (7.44) 39-60	62.91 (7.41) 50-72
MSES	125.89 (10.18) 100-132	56.33 (5.39) 44-60	69.56 (5.15) 56-72
All Caregivers	118.80 (13.89) 90-132	52.90 (7.17) 39-60	65.90 (7.18) 50-72

Two scores were examined from The Parental Reading Belief Inventory, the total score and a subset score of 25 items from the total that Weigel et al. (2006) found to be sensitive to differences between caregivers based on their literacy beliefs. The items represent caregivers' roles as teachers of school-related skills, positive affect associated with reading, the appropriateness of direct reading instruction, whether limited resources are an obstacle to reading, and the flexibility of language development. As shown in Table 10, for the total and for the 25 questions that differentiated the caregivers in previous work, there was not a significant difference between the two groups of caregivers, total  $F(1, 18) = .26$   $p = .63$ ; subset score  $F(1, 18) = .33$ ,  $p = .57$ .

Table 10

Descriptive Data for Parental Reading Belief Inventory

Group	Total M (SD) Range	Items 1-25 M (SD) Range
LSES	101.36 (12.14) 80-118	76.91 (8.72) 61-87
MSES	104.11 (13.15) 88-130	79.22 (9.30) 65-95
All Caregivers	102.60 (12.34) 80-130	77.95 (8.82) 61-95

## Caregiver Behaviors

**Preliminary Analysis.** Preliminary analyses were completed to evaluate the stability of the caregivers' behaviors prior to the caregiver training program. To do this, recall that a subsample of caregivers completed an additional pre-testing session to evaluate the stability of their behaviors.

Table 11 presents the means, standard deviations, and ranges for each of the behaviors at each time of

measurement. Five paired sample t-tests were used to examine differences between the first and second pre-testing. As can be seen, none of the behaviors was statistically different at the two points of measurement: tracking print  $t(8) = 1.50, p = .17$ ; references to print  $t(8) = .95, p = .37$ ; text to life  $t(8) = 2.04, p = .07$ ; interpretations  $t(8) = 1.85, p = .10$ ; and other book reading comments  $t(8) = 2.30, p = .05$ . The ranges for each behavior at each time of measurement also overlapped, with higher means for the first pre-testing session than the second session, with the exception of reference to print. These findings indicate that there was variability for all of the behaviors at each time of measurement and that the caregivers' behaviors, on average, did not increase as a function of repeated story book reading (i.e., practice).

To further evaluate the stability of the caregivers' behaviors within the sessions, five one-way repeated measures ANOVAs were used to examine differences in the 20 caregivers' behaviors across the three different books that were used at pre-testing. A Bonferroni correction was applied for multiple F tests and an alpha level of .01 (.05/5) was used. Table 12 presents the means, standard deviations, and ranges for each of the behaviors for each book. None of the behaviors was statistically different across the three books: tracking print;  $F(2, 38) = .88, p = .42$ ; reference to print;  $F(1.35, 24.66) = .59, p = .50$ ; text to life utterances;  $F(2, 38) = 4.38, p = .02$ ; interpretations;  $F(1.11, 20.75) = 1.95, p = .18$ ; other book reading comments;  $F(2, 38) = 2.08, p = .14$ . This analysis suggests that the caregivers' behaviors were not statistically different across the books used within the study. As seen in Table 12, there was variability across the caregivers as evident by the ranges of the behavioral counts, but this variability was not influenced by the particular books in a systematic manner.

Table 11

Comparison of Pre-test 1 to Pre-Test 2

Behavior	<u>Pre-Test 1</u>	<u>Pre-Test 2</u>
	M (SD) Range	M (SD) Range
Tracking	26.33 (46.22) 0-114	9.44 (18.51) 0-58
Reference to print	.33 (.71) 0-2	1.44 (3.28) 0-10
Text to life	4.22 (5.26) 0-14	1.89 (3.59) 0-12
Interpretations	6.22 (9.92) 0-31	1.89 (3.33) 0-9
Other book reading comments	89.89 (80.23) 23-245	61.55 (80.03) 5-255

Table 12

## Comparison of Behaviors Across Three Different Books

Behavior	<u>Book 1</u>	<u>Book 2</u>	<u>Book 3</u>
	M (SD) Range	M (SD) Range	M (SD) Range
Tracking print	8.44 (17.12) 0-53	9.00 (17.07) 0-50	8.89 (16.80) 0-39
Reference to print	.00 (.00) .00	.11 (.33) 0-1	.22 (.67) 0-2
Text to life	1.78 (3.00) 0-7	2.11 (2.09) 0-5	.33 (.71) 0-2
Interpretations	1.89 (3.02) 0-9	1.67 (2.60) 0-7	2.67 (4.84) 0-15
Other book reading comments	27.67 (23.10) 7-68	33.89 (32.87) 6-108	29.00 (27.40) 2-69



**Session Length.** Finally, preliminary analyses were completed to determine if the length of the caregivers' sessions changed from pre to post-testing and during the training. Table 13 provides the means, standard deviations, and ranges for each group at each time of measurement. First, a 2 x 2 analysis of variance was completed to evaluate change in length of session from pre to post-testing. For this analysis, pre and post-testing sessions were chosen because during each of these sessions, three books were used. For length of session, a significant main effect was found for time;  $F(1, 18) = 49.35, p < .001$ , partial eta squared .73, and for group;  $F(1, 18) = 4.54, p = .04$ , partial eta squared, .20. The interaction was also significant;  $F(1, 18) = 5.50, p = .03$ , partial eta squared .23. Post-hoc analysis revealed that at pre-testing, the groups were not statistically different;  $F(1, 18) = .56, p = .45$ ; however at post-testing the groups were statistically different, with the MSES group's sessions being longer than the LSES group's;  $F(1, 18) = 6.63, p = .01$ , eta squared .27. Figure 1 is a depiction of the interaction with the error bars included. The error bars represent the standard error of the mean.

Table 13

Length of Session for Pre- and Post-Test

Group	<u>Pre-Test</u>	<u>Post-Test</u>
	M (SD) Range	M (SD) Range
LSES	20.95 (3.86) 15.58-28.06	27.70 (6.94) 16.41-40.48
MSES	22.60 (5.73) 14.22-33.59	36.11 (7.66) 22.58-48.12
All Caregivers	21.69 (4.73) 14.22-33.59	31.49 (8.27) 16.41-48.12

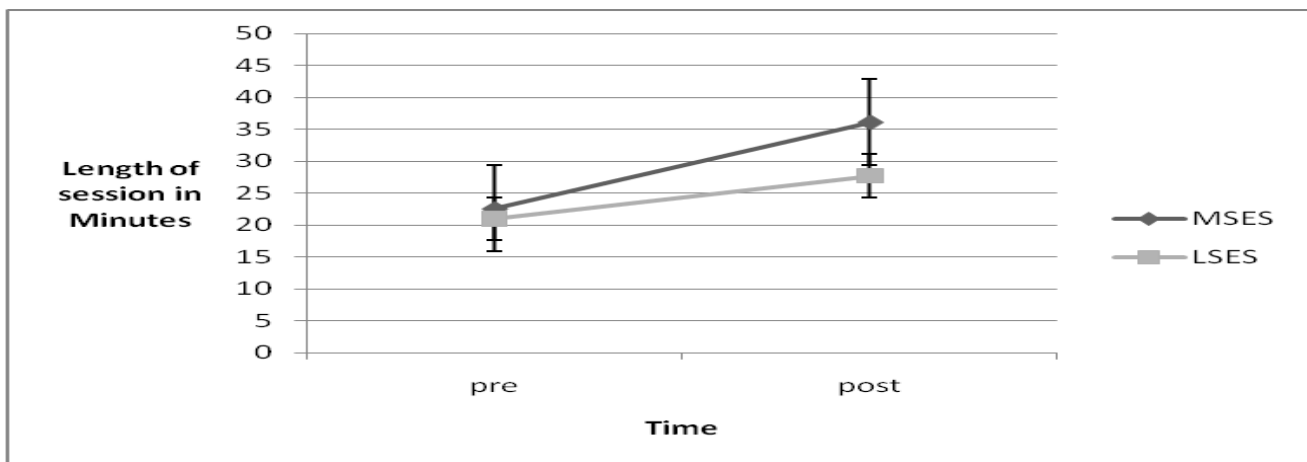


Figure 1. Preliminary Analysis of Pre- and Post-Testing Session Length

Next a 4 x 2 analysis of variance was completed to evaluate the length of sessions during the training and during the delayed post testing session. For this analysis, the three training probes and the delayed post-testing sessions were chosen because during each of these sessions only one book was used. Table 14 provides the means, standard deviations, and ranges for each group at each time of measurement. For length of session, a significant main effect was found for time;  $F(3, 54) = 15.53, p < .001$ , partial eta squared .46 and for group;  $F(1, 18) = 18.11, p < .001$ , partial eta squared .50; however, the interaction was not significant;  $F(3, 54) = 10.46, p = .08$ . The results indicate that across the four sessions, each group's length of sessions increased, and across all four sessions, the MSES group's sessions were longer than the LSES group's. Figure 2 is a depiction of the average length of the four sessions with error bars included. The error bars represent the standard error of the mean.

### Summary of Preliminary Analyses

Based on the results of the preliminary analyses, the caregivers' behaviors were considered to be stable across time prior to the implementation of training. The caregivers were also shown to vary in their use of behaviors when reading to their children; however, this variability was not influenced in a systematic manner by the particular books selected. Finally, given that the length of the sessions increased across time and there were group differences in the session lengths that favored the MSES

group, all additional analyses of these data needed to be controlled for time, or else the behavioral differences found between the groups would be confounded by this variable. To control for time, I divided the frequency of each behavior by the number of minutes within each session. Given that each session was controlled for time, I was able to examine all six sessions at the same time.

Table 14

Length of Session During Training and at Delayed Post-Testing

Group	<u>Probe 1</u>	<u>Probe 2</u>	<u>Probe 3</u>	<u>Delayed Post-testing</u>
	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range
LSES	7.40 (1.90) 5.23-11.56	7.81 (1.99) 4.44-11.57	7.87 (2.92) 1.06-13.43	11.49 (3.43) 7.09-18.37
MSES	10.71 (2.44) 8.29-15.21	13.86 (5.25) 7.38-24.25	14.17 (3.91) 6.26-18.32	15.67 (2.60) 11.36-19.49
All Caregivers	8.89 (2.69) 5.23-15.21	10.53 (4.82) 4.44-24.25	10.71 (4.61) 1.06-18.32	13.37 (3.69) 7.09-19.49

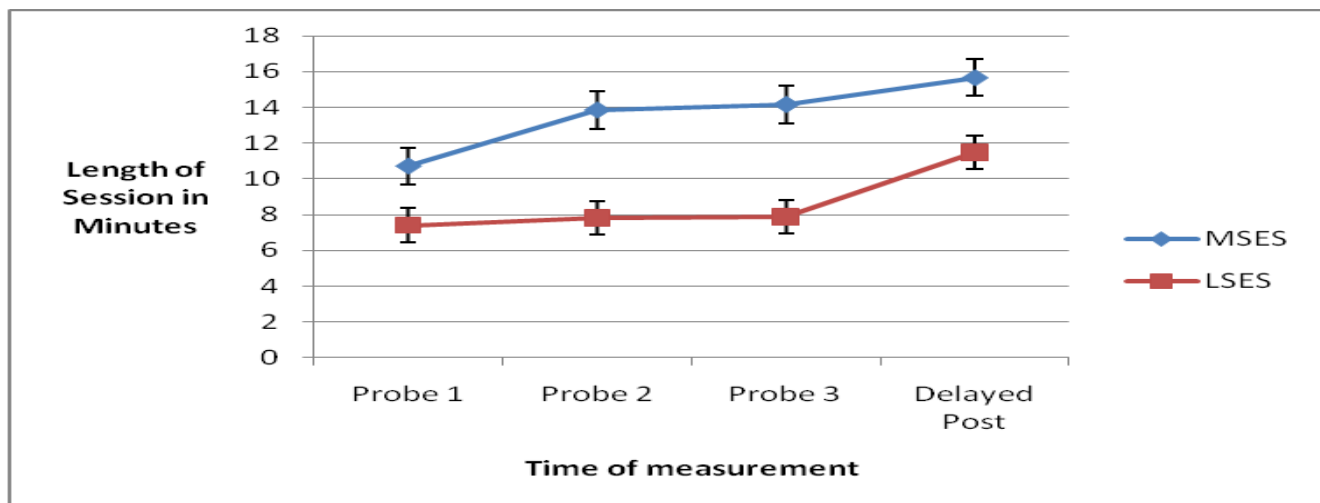


Figure 2. Preliminary Analysis of Length of Session Across Training Probes and Delayed Post-Testing

## Analyses

Five 2 (group) x 6 (time) ANOVAs were completed to examine the caregivers' behaviors before, during, and after training was completed. The two independent variables were group (LSES and MSES) and time (pre-testing, probe 1, probe 2, probe 3, post-testing, and delayed post-testing), and the dependent variables were the five behaviors that were coded.

**Tracking print.** Tracking the print was when the caregivers ran their finger under the words when reading. Table 15 provides the means, standard deviations, and ranges for tracking print for each group at each time of measurement. For tracking print the main effect for time was significant;  $F(2.78, 50.05) = 28.11, p < .001$ , partial eta squared = .61; however, the main effect for group was not significant  $F(1, 18) = 2.66, p = .12$ , and the interaction was not significant  $F(2.78, 50.05) = 5.51, p = .54$ . Given that the main effect for group was not significant, the groups were combined to further evaluate the main effect for time. Figure 3 provides a visual representation of the caregivers' use of tracking print across the six different sessions with the error bars included. The error bars represent the standard error of the mean.

Table 15

### Tracking Print Across Time

<u>Group</u>	<u>Pre-Testing</u>	<u>Probe 1</u>	<u>Probe 2</u>	<u>Probe 3</u>	<u>Post-Testing</u>	<u>Delayed Post-testing</u>
	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range
LSES	1.44 (2.22) .00-6.60	6.69 (2.43) 2.68-10.50	6.14 (2.99) .68-9.84	6.55 (3.12) .00-9.98	7.74 (3.37) .59-11.38	6.98 (2.49) 1.39-10.05
MSES	.70 (1.71) .00-5.24	6.21 (1.17) 4.21-7.48	4.71 (2.18) 1.15-8.54	4.83 (2.48) 1.86-10.22	5.67 (2.74) 2.06-10.58	4.95 (1.76) 2.00-7.48

All	1.11	6.47	5.50	5.78	6.81	6.06
Caregivers	(1.99)	(1.93)	(2.69)	(2.91)	(3.20)	(2.37)
	.00-6.60	2.68-10.50	.68-9.84	0-10.22	.59-11.38	1.39-10.05

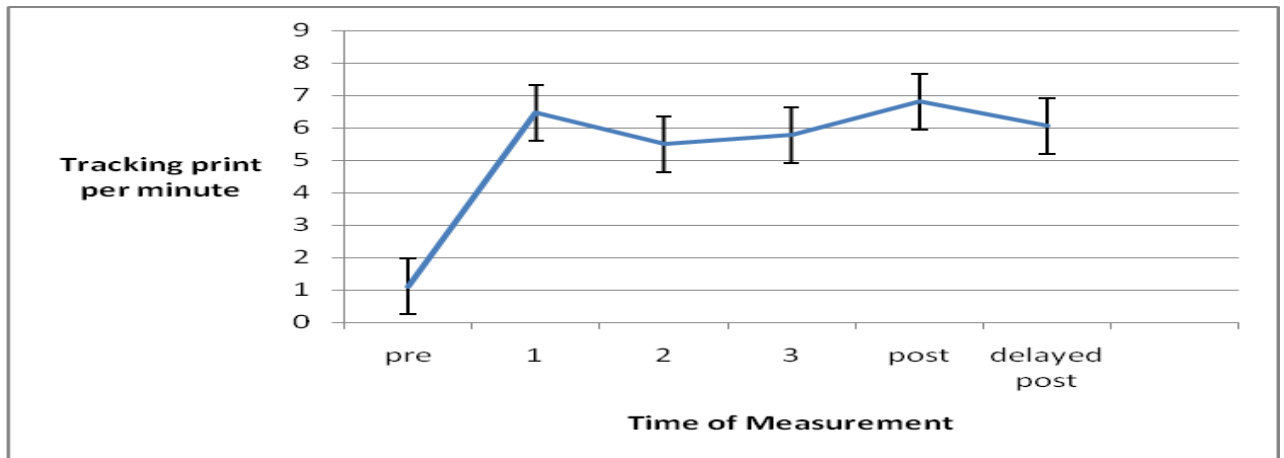


Figure 3. Tracking print across six sessions with groups combined

The comparisons of interest were the pre-testing behaviors compared to each probe, pre-testing behaviors compared to post-testing behaviors, and post-testing behaviors compared to delayed post-testing behaviors. Therefore, only five paired sample t-tests were completed as opposed to 15. There was a significant difference between the use of tracking print at pre-testing and at Probe 1;  $t(19) = 7.49, p < .001$ , Probe 2;  $t(19) = 6.12, p < .001$ , and Probe 3;  $t(19) = 6.73, p < .001$ . In each case, tracking print was greater in the probe than in pre-testing. The caregivers also used tracking print more at post-testing than they did at pre-testing;  $t(19) = 7.61, p < .001$ , but their use of tracking print was not statistically different from post-testing to delayed post-testing;  $t(19) = 2.01, p = .06$ . This finding indicated that the caregivers continued to use the behavior at the same rate approximately a week after training was completed.

**Text to Life.** Text to life utterances were any comments or questions the caregivers used to relate the story to their children's lives. Table 16 provides the means, standard deviations, and ranges for text to life utterances for each group at each time of measurement. Results of the 2x6 ANOVA

indicated that the main effect for time was significant;  $F(5, 90) = 11.42, p < .001$ , partial eta squared = .39, the main effect for group was significant  $F(1, 18) = 18.77, p < .001$ , partial eta squared = .51, but the interaction was not significant  $F(5, 90) = 1.39, p = .24$ . For the group effect, the MSES group used text to life utterances more than the LSES group at each time of measurement with the exception of pre-testing where the groups rarely produced these utterances.

Table 16

Means, Standard Deviations, and Ranges for Text to Life Utterances at Each Time of Measurement

Group	<u>Pre-Testing</u>	<u>Probe 1</u>	<u>Probe 2</u>	<u>Probe 3</u>	<u>Post-Testing</u>	<u>Delayed Post</u>
	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range
LSES	.01 (.03) .00-.10	.46 (.41) .00-1.15	.33 (.39) .00-1.10	.69 (.50) .00-1.28	.65 (.39) .00-1.26	.51 (.54) .00-1.96
MSES	.01 (.02) .00-.51	.86 (.43) .12-1.53	.92 (.46) .28-1.66	.88 (.47) .26-1.58	1.09 (.26) .82-1.51	1.16 (.46) .26-1.81
All Caregivers	.09 (.14) .00-.51	.64 (.46) .00-1.53	.59 (.51) .00-1.66	.77 (.49) .00-1.58	.85 (.40) .00-1.51	.80 (.60) .00-1.96

With the groups combined, there was a significant difference between the use of text to life at pre-testing and at Probe 1;  $t(19) = 5.99, p < .001$ , Probe 2;  $t(19) = 4.38, p < .001$ , and Probe 3;  $t(19) = 6.12, p < .001$ . In each case, the use of text to life utterances was greater in the probe than in the pre-testing session. The caregivers also used more text to life utterances at post-testing than they did at pre-testing;  $t(19) = 9.10, p < .001$ . The caregivers' use of text to life utterances was not statistically different from post-testing to delayed post-testing;  $t(19) = .47, p = .65$ . This finding indicated that the caregivers were able to continue to use the strategy approximately one week after training was

completed. Figure 4 provides a visual representation of the means for the caregivers at each time of measurement with the error bars included. The error bars represent the standard error of the mean.

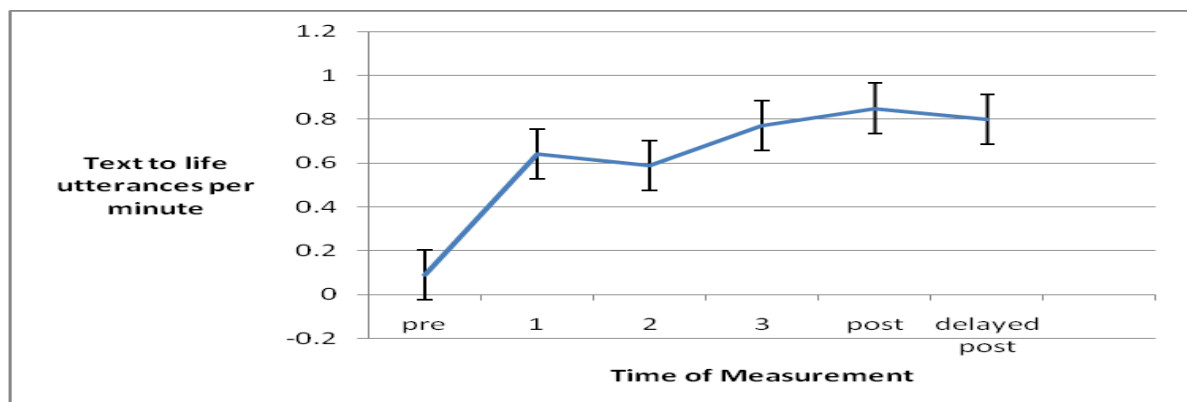


Figure 4. Text to life utterances across six sessions with groups combined

As a final analysis of the caregivers' text to life utterances, the utterances were visually inspected to determine if there were any that were being used by one group and not by the other. Recall that these utterances served to relate the story to the child's own life in several different ways. As can be seen in Table 17, the groups were similar in the types of text to life utterances they produced. For example, one of the books used at pre-testing and post-testing was about Opal, the main character, coming to visit her cousins. Opal is excited because she is about to lose her tooth. At bedtime, Opal is excited about the tooth fairy coming and bringing her some money, but her cousins (Toot and Puddle) are not sure that the tooth fairy will come to their home. In the end, the tooth fairy comes and leaves Opal a shiny new quarter. During this story, some examples of text to life utterances produced by both groups of caregivers included, "*She go lose her tooth like you did?*" (LSES group), or "*The teeth came out just like yours did.*" (MSES group).

Both groups of caregivers also used similar text to life utterances during the probes. The book used during the probes was about Archie, the main character, and his friends preparing to go to a pet show. At the beginning of the story Archie cannot find his pet, and his friends leave and go to the pet show without him. The story proceeds with Archie finally arriving at the pet show where he sees that a

lady shows up with his pet, the cat. At the end, the lady wins a prize for Archie's cat and she tells Archie he can have her prize. During the reading of this book, the caregivers from both groups most often asked their children to talk about their own pets (i.e., *What type of pet do you have?* (LSES group); *What kind of pet would you bring?* (MSES group); or asked them to remember a time when they won a prize at school for doing something (i.e., *At school you got a ribbon for doing something good?* (LSES group); *You got a prize at school before?*" (MSES group).

Finally, both groups also produced similar types of text to life utterances during the delayed post-testing session. The story used at delayed post-testing was about Pippin who wanted his mother to tell him stories before going to bed at night. At the end of each story, Pippin asks his mother to tell him another story. At the end of the book, when Pippin's mother is finally done reading, she gives him a kiss goodnight and Pippin gives her a kiss goodnight and he goes to bed. During this session, the caregivers from both groups asked the children questions regarding their enjoyment of being read a book or encouraged them to remember times when they may have been acting like Pippin who didn't want to go to sleep (i.e., *"You like when people read bed stories to you?"* (LSES group); *"Who is Pippin acting like?"* (MSES group); *I kiss you goodnight too* (LSES group); *"Does mama kiss you?"* (MSES group).

**Interpretations.** Interpretations were requests by the caregivers that required the children to either make predictions and inferences about the book content, offer an opinion about the characters' emotions, or offer an opinion of the book. Table 18 provides the means, standard deviations, and ranges for interpretations at each time of measurement. Results from the 2 x 6 ANOVA indicated that the main effect for time was significant;  $F(5, 90) = 7.34, p < .001$ , partial eta squared = .29 and the main effect for group was significant  $F(1, 18) = 10.74, p = .004$ ; but the interaction was not significant;



$F(5, 90) = .48, p = .79$ . For the group effect, the MSES group used interpretations more than the LSES group.

With the groups combined, there was a significant difference between the use of interpretations at pre-testing and at Probe 1;  $t(19) = 2.93, p = .01$ , Probe 2;  $t(19) = 3.93, p = .001$ , and Probe 3;  $t(19) = 3.92, p = .001$ . In each case, the caregivers' use of interpretations was greater in the probe than in the pre-testing session. The caregivers also used interpretations more at post-testing than they did at pre-testing;  $t(19) = 3.58, p = .002$ . The caregivers' use of interpretations was not statistically different from post-testing to delayed post-testing;  $t(19) = .43, p = .68$ . This finding indicated that the caregivers were able to continue to use the strategy approximately one week after training was completed. Figure 5 provides a visual representation of the means for the caregivers at each time of measurement with the error bars included. The error bars represent the standard error of the mean.

As a final analysis, the caregivers' interpretation requests were examined visually and in Table 19, some examples of these behaviors are provided. As can be seen, the caregivers in each group produced similar types of interpretations during the study. A response often seen by the caregivers across all sessions that required the child to give her opinion of the book was, "*Did you like those books?*" (LSES group), or "*Did you like that one?*" (MSES group).

Both groups of caregivers also used similar interpretations during the probes. Recall the book used during the probe was about Archie, who lost his pet, and his friends preparing for the pet show. While looking for Archie's cat, the other pets begin to chase each other heading toward the pet show. During this portion of the story, the caregivers from both groups often asked their children to provide an inference about the book content (i.e., "*When the mouse took off where you think he ran to?*" (LSES group); "*Where could that cat be?*" (MSES group). Interpretations also included requests by the caregivers that required their children to offer an opinion about the characters' emotions. The

caregivers from both groups produced this type of interpretation as well ( i.e., “*He can’t find his cat so you think Aker mad?*” (LSES group); “*How do you think Archie felt when he couldn’t be in the pet show?*” (MSES group).

Finally, both groups produced similar types of interpretation utterances during post-testing. One of the books used during post-testing was about Groundhog who refuses to hibernate during the winter. His friends warn him that he will be lonely, cold and hungry during winter. Groundhog refuses to listen to them and does not hibernate. As winter progresses, Groundhog becomes very hungry so he tricks his friends and makes them think spring came early so that they would give him their food. In the end, the other animals discover that Groundhog tricked them and they later play a trick on Groundhog. During this story, the caregivers utterances included, “*You think Groundhog learned his lesson?*” (LSES group), and “*So you think he had fun by himself?*” (MSES group).

**Reference to Print.** Reference to print utterances were defined as any comments, requests or questions about print. Table 20 provides the means, standard deviations, and ranges for references to print at each time of measurement. Results of the 2 x 6 ANOVA revealed that the main effect for time was significant;  $F(5, 90) = 17.69, p < .001$ , partial eta squared = .50, the main effect for group was significant  $F(1, 18) = 14.40, p = .001$ , partial eta squared = .44, and the interaction was significant;  $F(5, 90) = 4.01, p = .003$ , partial eta squared = .18.

Post-hoc analyses of the interaction revealed that the groups were not statistically different at pre-testing,  $F(1, 18) = .05, p = .83$ , post-testing  $F(1, 18) = 3.13, p = .09$ ; or delayed post-testing  $F(1, 18) = .59, p = .45$ ; however, the groups were statistically different at probe 1,  $F(1, 18) = 8.40, p = .01$ ; probe 2,  $F(1, 18) = 25.53, p < .001$ , and probe 3,  $F(1, 18) = 7.31, p = .02$ , with the MSES group producing more reference to print utterances than the LSES group.

Nevertheless, when each group was examined separately to evaluate changes in their behaviors across the training probes, the results patterned the same. This is because both groups increased their behaviors across the three training probes. For the LSES group, there was a significant difference between the use of reference to print at pre-testing and at Probe 1;  $t(10) = 3.52, p = .01$ , Probe 2;  $t(10) = 3.77, p = .004$ , Probe 3;  $t(10) = 6.05, p < .001$  and for the MSES group, there was a significant difference between the use of reference to print at pre-testing and at Probe 1;  $t(8) = 3.91, p = .004$ ; Probe 2;  $t(8) = 12.04, p < .001$ ; Probe 3:  $t(8) = 7.13, p < .001$ . Thus, for both groups, the use of reference to print was greater in the probes than in the pre-testing session, and both groups of caregivers used reference to print more at post-testing than they did at pre-testing; LSES:  $t(10) = 3.87, p = .003$ ; MSES:  $t(8) = 6.83, p < .001$ . Both groups of caregivers' use of reference to print was not statistically different from post-testing to delayed post-testing; LSES:  $t(10) = .82, p = .43$ ; MSES:  $t(8) = .23, p = .82$ . Together, these findings indicate that the interaction was tied to the behaviors during the training probes. Specifically, during the probes which were administered during the training program, the MSES group produced more of these behaviors than the LSES group even though these group differences were not maintained at post-test or delayed post-test. Figure 6 provides a visual representation of the interaction with the error bars included. The error bars represent the standard error of the mean.

As a final analysis, the caregivers' reference to print utterances were examined visually and in Table 21, some examples of these behaviors are provided. During visual inspection of these data, I noticed that the groups produced the same types of reference to print utterances; however during the training probes, there were three types of references to print that were not specifically targeted in the program that appeared in the data. These behaviors included spelling, references to punctuation marks, and sound manipulation requests, which was when a caregiver encouraged her child to make a new

word by deleting sounds from a word or by substituting sounds in words. Although, one of the examples in the video depicted a caregiver spelling a word, spelling was not used as an example of reference to print any other time during the training.

To further explore the data, the references to print from the three probes were further coded into four different behaviors: identification (naming a letter or word; asking the child to identify what sound the letter made), spelling (asking the child to spell a word or spelling the word for the child), sound manipulation (deleting or substituting sounds in a word), and punctuation (identifying a punctuation mark for the child or requesting that the child tell what the punctuation mark was or what it meant). The results revealed that 97% of the LSES group's 296 references to print were targeted in the training program (i.e., identification). In comparison, 84% of the MSES group's 921 references to print were targeted in the program (i.e., identification). The other 3% of the LSES group's reference to print utterances were related to spelling and these were not produced until Probe 3 even though the video used during Probe 1 showed an example of spelling. The other 16% of the MSES group's reference to print utterances included comments that focused on spelling (7%), punctuation (5%), and sound manipulation (4%). The MSES group began to use spelling during Probe 1 whereas their use of utterances that made references to punctuation and sound manipulation did not occur until Probe 2.

When comparing the two groups across the three training probes, the results suggest that the caregivers in the MSES group produced considerably more reference to print utterances than the LSES group. As can be seen in Table 22, the caregivers in the MSES group also produced three other types of reference to print behaviors and one of these (i.e., spelling) was produced by the MSES caregivers as early as the first training session. In comparison, almost all of the LSES group's reference to print utterances was targeted in the training. Of the few that were not targeted in the training, they focused on spelling and were not produced until Probe 3.

Table 17

## Examples of Text to Life Utterances for Each Group

Group	<u>Pre-Testing</u>	<u>Probe 1</u>	<u>Probe 2</u>	<u>Probe 3</u>	<u>Post-Testing</u>	<u>Delayed Post</u>
LSES	We had watermelon today (huh)? She go lose her tooth like you did?	Do you have a pet? What type of pet do you have? Didn't we have pets? You want a pet? What would your pet name be? What kind of pet would you have?	What would you name your pet? Do you have friends? What kind of hats you have? Your brother have hats?	Now what pet you said you'll take to the pet show? You chased one of your friends outside before? At school you got a ribbon for doing something good? Do you like to play with ants? Don't your grandmother has a big old cat?	Do you tell me the truth or you what? You ate a watermelon before? You want somebody to yank it out for you? You never got lonely before? You saw a owl in real life before?	You ever make some noise make somebody go away? You think your daddy a do that is somebody take you? I kiss you goodnight too. You ever played a tambourine before? You like when people read bed stories to you?
MSES	You saw this tv show (huh)? You had a loose tooth? The teeth came out just like yours did? Who calls you sleepyhead?	Do you have a pet? What was the dog's name that was here? What would you bring to the pet show? Do we have a big dog or a little dog? What kind of pet would you have? You know somebody with a cat?	Do you have a pet? You wouldn't try to find your cat? What kind of pet would you bring? You ever been sad because you couldn't find something?	Mommy tells you to wash your hands. Do you have germs? What pet would you take to the pet show? You got a prize at school before? Have you ever seen a frog in another story?	Have you ever played a trick on anybody? We like spring (huh)? Have you felt lonely? You like to sleep like the owl? You never played in snow before?	Who is Pippin acting like? Do we freeze anything at home? Where do we see a tambourine? Does Mama kiss you?

Table 18

Means, Standard Deviations, and Ranges for Interpretations at Each Time of Measurement

Group	<u>Pre-Testing</u>	<u>Probe 1</u>	<u>Probe 2</u>	<u>Probe 3</u>	<u>Post-Testing</u>	<u>Delayed Post</u>
	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range
LSES	.03 (.05) .00-.16	.14 (.21) .00-.67	.49 (.60) .00-1.66	.55 (.48) .00-1.29	.28 (.21) .00-.58	.29 (.41) .00-1.29
MSES	.27 (.28) .00-.92	.69 (.46) .00-1.40	.81 (.48) .28-1.64	1.04 (.83) .11-2.73	.65 (.36) .32-1.38	.72 (.20) .41-1.00
All Caregivers	.14 (.22) .00-.92	.39 (.44) .00-1.40	.63 (.56) .00-1.66	.77 (.69) .00-2.73	.45 (.34) .00-1.38	.48 (.39) .00-1.29

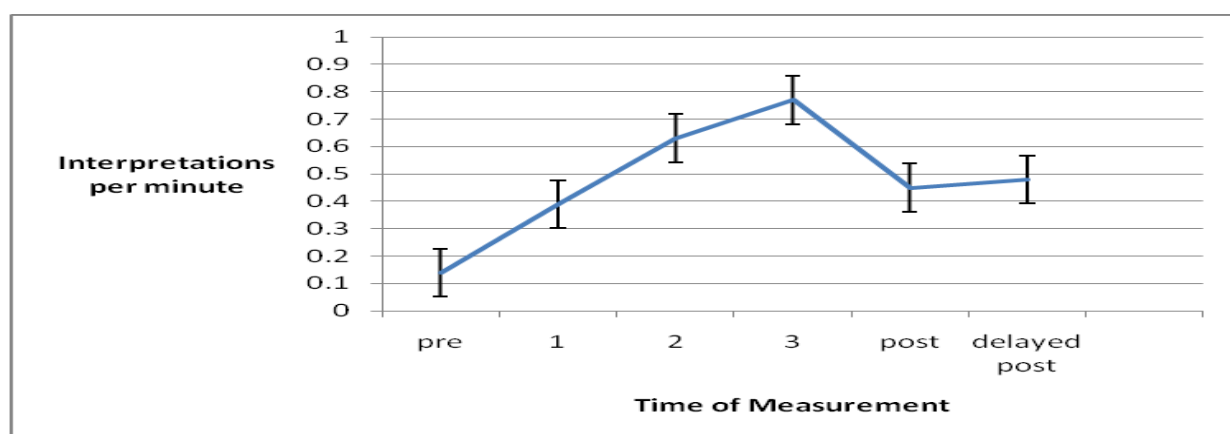


Figure 5. Interpretations Across Six Sessions with Groups Combined

Table 19

## Examples of Interpretations

Group	<u>Pre-Testing</u>	<u>Probe 1</u>	<u>Probe 2</u>	<u>Probe 3</u>	<u>Post-Testing</u>	<u>Delayed Post</u>
LSES	Did you like that one? Did you like those books? Was that good? What he stay up late for? Did he learn his lesson?	Did you like this story? What you liked about the story? What you think he have in that bag? So where is he coming from?	What's in his bag? How did you like the pet show? What did you like about this story? When the mouse took off where you think he ran to? Why do you think Archie wanted the old lady to have the ribbon?	How do you think archie's feeling right now? What do you think Archie has in his hand? He can't find his cat so you think aker mad?	You like that book? Why you tink he didn't come? What idea he trying to do? Where you think the tooth at? Why she was trying not to cry? You think Groundhog learned his lesson?	What you think he about to do next? You think pippin went to sleep after that? You think that made the wizard mad that he couldn't have his soup hot? What you think this book is gonna be about? What she look like she is surprised or shocked to see them?
MSES	Did you like that one? You think that's his shadow? You think he learned his lesson? What you think they getting ready to do? How do you think she feels?	You think that cat can fit in that bag? Where could the cat be? Do you think he was happy or sad? So what you think he's in the trashcan? What do you think's in his hand?	Do you think they're going to start the show without Archie? Where do you think he's coming from?	Do you think he was looking for the cat too? What do you think they wondering about? How do you think Archie felt when he couldn't be in the pet show?	Do you think the Owl is gonna come back? Do you think he's pretty happy? So why do you think she wants it to come? Did you like that? So you think he had fun by hisself?	How do you think he feels? What do you think this story is gonna be about? Where do you think they're going to? What do you think they're gonna do the pirates?

Table 20

Means, Standard Deviations, and Ranges at Each Time of Measurement for Reference to Print

Group	Pre-Testing	Probe 1	Probe 2	Probe 3	Post-Testing	Delayed Post
	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range
LSES	.01 (.03) .00-.09	.59 (.54) .00-1.53	1.11 (.96) .00-2.61	1.50 (.82) 0-2.83	1.05 (.89) .00-2.58	1.36 (1.42) .00-5.15
MSES	.01 (.02) .00-.05	2.04 (1.56) .48-4.34	3.11 (.78) 1.95-4.33	2.67 (1.12) 1.53-4.63	1.72 (.77) .40-2.52	1.78 (.96) .41-3.66
All Caregivers	.01 (.02) .00-.09	1.24 (1.32) .00-4.34	2.01 (1.33) .00-4.33	2.03 (1.11) .00-4.63	1.35 (.88) .00-2.58	1.55 (1.22) .00-5.15

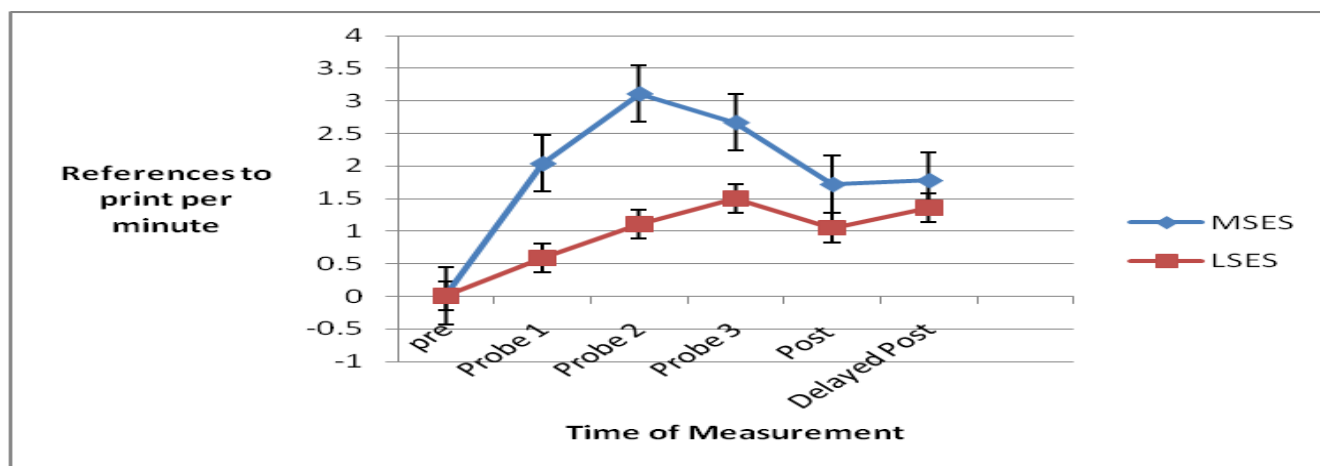


Figure 6. Reference to Print Across Study



Table 21

## Examples of Reference to Print at Each Time of Measurement

Group	Pre-Testing	Probe 1	Probe 2	Probe 3	Post-Testing	Delayed Post
LSES	And see the z's? What that say?	What does that word begin with? Where a c at? What's that word? What letter is that? Show me where the o at. Show me the c's.	What letter is this? Make the p sound. Pu pu. What's this word? Show me the alphabet r. Where you see a c at? Are there any s's on this page?	Where you see p e t at? How many m's on this page? Could you find the letter p on this page? What that say? Where al at again? Point to cat. T t turtle. What make that sound mmm? <b>and the pet is p e t.</b>	Owl is a three letter word. Point to the letter i. Point to the word owl. Find all the g's. What sound do that make?	What letter book start with? That's they. Show me where the word baby is. That's p for pirate and p for pippin.
MSES	I know you know that word.	Can you find that word somewhere else on this page? What is this word again? What letter is that? How do you spell dog? You know that word? What cat start with? <b>Spell it for me.</b>	<b>So if we were to change that c to a h what would it be?</b> That word is cat. Show me pet first. It starts with the letter w. <b>What about that mark at the end? Could you spell puppy for me? What does that exclamation point mean?</b>	Is that a big e or a little e? There's a new word here. <b>With an h we could make it hook.</b> Could you point to the word pets? This word says show.	What sound does the letter g make? Can you find c as in cat? Find all the I's for me.	What sound does the p make? You know what that word is? Point to the capital g. Remember this little word we learned here before?

Table 22

Reference to Print Utterances Further Coded

Group	<u>Probe 1</u>	<u>Probe 2</u>	<u>Probe 3</u>
	Total (N)	Total (N)	Total (N)
LSES			
Behavior targeted in training	48 (8)	107 (9)	131 (10)
Spelling	0	0	10 (3)
Punctuation	0	0	0
Sound manipulation	0	0	0
MSES			
Behavior targeted in training	166 (9)	349 (9)	262 (9)
Spelling	14 (3)	22 (6)	30 (6)
Punctuation	0	29 (3)	16 (4)
Sound Manipulation	0	7 (2)	26 (3)
All Caregivers			
Behavior targeted in training	214 (17)	456 (18)	393 (19)
Spelling	14 (3)	22 (6)	40 (12)
Punctuation	0	29 (3)	16 (4)
Sound Manipulation	0	7 (2)	26 (3)

(a) Number in parentheses indicates number of caregivers in the group who produced the behavior

**Other Comments Made During Book Reading.** Other comments made during book reading were utterances that the caregiver said that could not be coded as one of the four targeted behaviors. Table 23 provides the means, standard deviations, and ranges for the other book reading comments. For other book reading comments, the main effect for time was significant;  $F(5, 90) = 18.80, p < .001$ , partial eta squared = .51 and the main effect for group was significant  $F(1, 18) = 13.96, p = .002$ , partial eta squared = .44; however, the interaction was not significant;  $F(5, 90) = 1.95, p = .09$ . For the group effect, the MSES group produced more of the other book reading comments than the LSES group.

With the groups combined, there was a significant difference between the use of other book reading comments at pre-testing and at Probe 1;  $t(19) = 6.63, p < .001$ , Probe 2;  $t(19) = 7.96, p < .001$ ,

and Probe 3;  $t(19) = 7.45, p < .001$ . In each case, the use of other book reading comments was greater in the probe than in the pre-testing session. The caregivers also used other book reading comments more at post-testing than they did at pre-testing;  $t(19) = 4.63, p < .001$ , and the caregivers' use of other book reading comments was not statistically different from post-testing to delayed post-testing;  $t(19) = .52, p = .61$ . Figure 7 provides a visual representation of the means at each time of measurement with the groups combined.

Table 23

Means, standard deviations, and ranges for each group for other book reading comments at each time of measurement

Group	<u>Pre-Testing</u>	<u>Probe 1</u>	<u>Probe 2</u>	<u>Probe 3</u>	<u>Post-Testing</u>	<u>Delayed Post</u>
	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range	M (SD) Range
LSES	1.59 (1.40) .06-5.06	4.00 (3.06) .33-10.38	4.88 (2.88) 1.13-10.10	4.50 (2.73) .94-10.50	3.28 (2.11) .30-6.84	3.85 (2.55) .00-7.31
MSES	3.78 (2.75) .49-7.47	8.62 (3.55) 3.98-14.76	8.60 (2.65) 4.20-13.05	9.45 (2.61) 5.75-12.95	7.94 (3.69) 3.63-16.15	7.91 (3.43) .00-12.06
All Caregivers	2.58 (2.34) .06-7.47	6.08 (3.97) .33-14.76	6.55 (3.30) 1.13-13.05	6.73 (3.63) .94-12.95	5.38 (3.71) .30-16.15	5.68 (3.56) .00-12.06

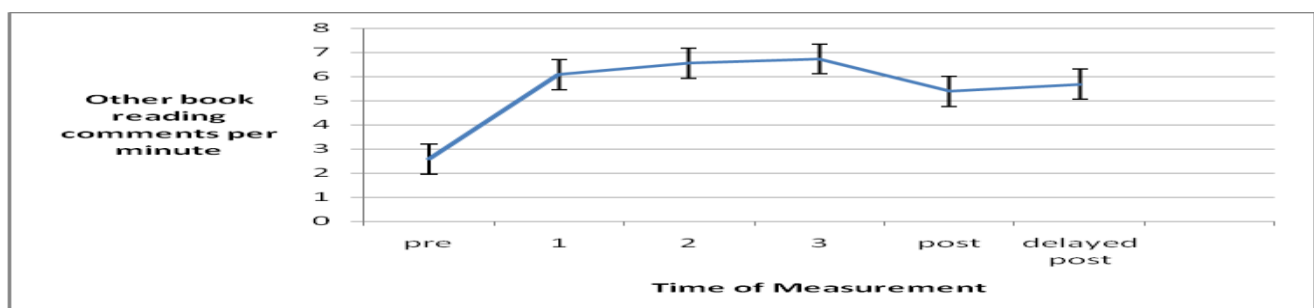


Figure 7. Other Book Reading Comments Across Study with the Groups Combined

As a final analysis, the caregivers other book reading comments were examined and the results revealed that the other book reading comments served several different purposes. To further examine these behaviors, the caregiver utterances were grouped into categories based on their function and/or content. Categories of behaviors that naturally appeared in the data were: affirmations, directives, prohibitions, labels, comprehension checks, additions of information, requests for or provisions of a definition, clarifications, tests of the child's prior knowledge, or repetitions/ recasts of the child's utterance. Table 24 provides a definition and examples of each of these behaviors.

After further coding the data it was found that across training probes, the LSES group produced 3,934 utterances and 1,291 (33%) were other book reading comments. In comparison, the MSES group produced 6,777 total utterances across the training probes and 3,210 (47%) were other book reading comments. These included affirmations (LSES 266 (21%), MSES: 831 (26%); directives (LSES 107 (8%), MSES 324 (10%); prohibitions (LSES 79 (6%), MSES 70 (2%); labels (LSES 306 (24%), MSES 361 (11%); comprehension checks (LSES 206 (16%), MSES 302 (9%); additions of information (LSES 195 (15%), MSES 664 (21%); requests or provisions of a definition (LSES 27 (2%), MSES 114 (4%); requests for clarification (LSES 46 (4%), MSES 120 (4%); repetitions/recasts of a child's utterance (LSES 55 (4%), MSES 353 (11%) and tests of the child's prior knowledge (LSES 4 (0%), MSES 71 (2%). Figure 8 provides a visual representation of the LSES group's production of other book reading comments and Figure 9 provides a visual representation of the MSES group's production of other book reading comments.

When comparing the two groups, there are two interesting findings. First, the caregivers in the MSES group produced a larger percentage (47%) of other book reading comments than the LSES group (33%). Also a closer examination of the percentages of the types of other book reading comments suggests that perhaps the other book reading comments produced by the caregivers in the

MSES were richer considering these caregivers used more additions of information, definitions, and prior knowledge than the caregivers in the LSES group. These findings also suggest that the caregivers in the MSES may be making book reading more interactive than the LSES group by requiring more from the child during book reading. For example, the additions of information, definitions, and prior knowledge categories could require the child to provide a response. Also, notice that the caregivers in the LSES group produced more prohibitions across the training probes than the caregivers in the MSES group (6% and 2%, respectively).

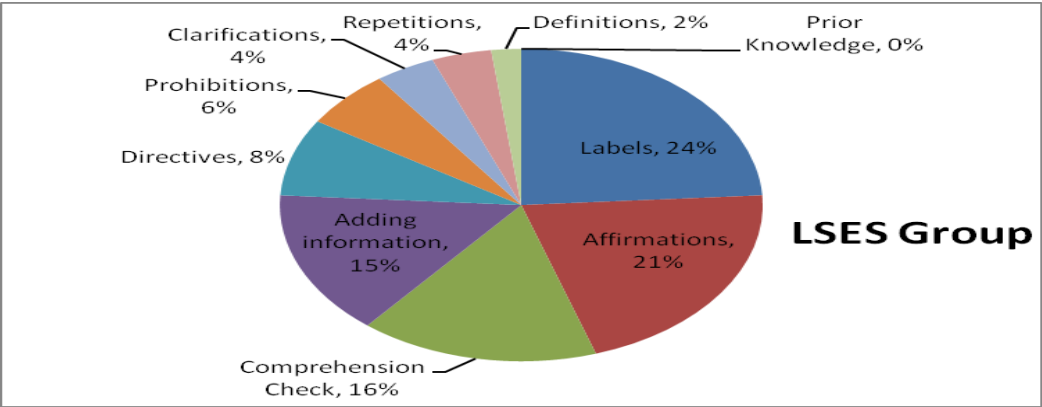


Figure 8. Other Book Reading Comments Produced by the LSES Group

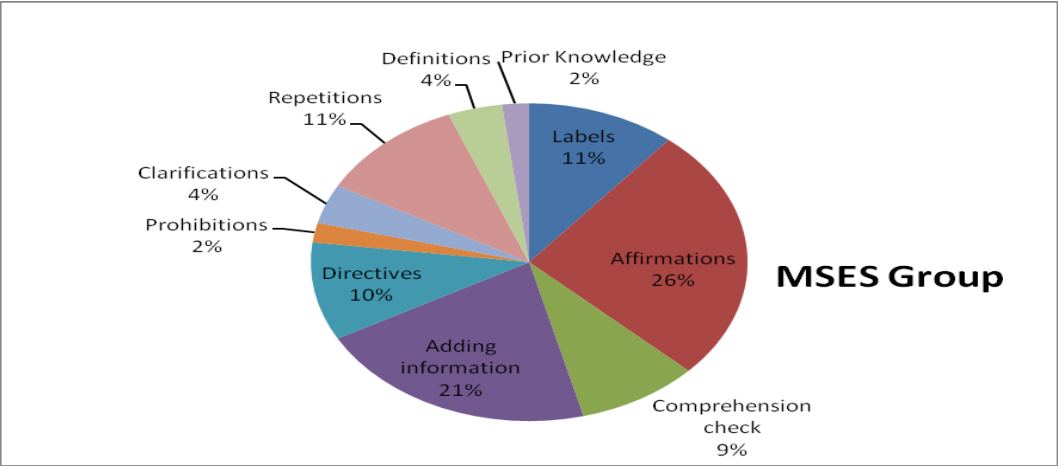


Figure 9. Other Book Reading Comments Produced by MSES Group

Table 24

## Other Book Reading Comments Defined

Second layer of codes	Definition
Affirmations	Utterances that expressed caregiver approval (e.g., “Yes.” “ <i>Very good.</i> ” “ <i>Uhhuh.</i> ”)
Directives	Utterances that provided an order or an expected verbal response or action from the child (e.g., “ <i>Sit down.</i> ” “ <i>Get over here.</i> ”)
Prohibitions	Utterances that expressed caregiver disapproval (e.g., “ <i>Stop it!</i> ” “ <i>No.</i> ”)
Labels	Utterances that provided or requested a name for an object or person (e.g., “ <i>Who is that?</i> ” “ <i>How many judges do you see?</i> ”)
Comprehension checks	Utterances that tested the child’s understanding of the story (e.g., “ <i>What archie them looking for?</i> ” “ <i>The cat name is what?</i> ”)
Additions of information	Utterances that gave additional information about the story or requested the child to provide additional information about the story (e.g., “ <i>She’s going home.</i> ” “ <i>That’s the end of that book.</i> ” “ <i>The mouse is hiding.</i> ”)
Definitions	Utterances that provided the meaning of a word or required the child to provide the meaning of a word (e.g., “ <i>What does search mean?</i> ” “ <i>What is pets?</i> ” “ <i>You talking very softly and very slowly.</i> ”)
Clarifications	Utterances used by caregiver when they did not understand what the child said (e.g., <i>huh?</i> , <i>the old lady?</i> , <i>excuse me?</i> )
Prior knowledge	Utterances that tested what the child already knew about the world (e.g., <i>which one of these pets would you wanna be?</i> , <i>how a cat sound?</i> )
Repetitions/recasts	Utterances in which the caregiver repeated the child’s previous utterance.

## Summary of Results

Table 25 summarizes the findings for the analyses of the caregivers' behaviors before, during, and after the training program. As can be seen, for four of the behaviors (tracking print, text to life, interpretations, other book reading comments), there was a main effect for time indicating that the caregivers' use of the behaviors changed throughout the training. In all cases, the time effect related to the caregivers producing more of the behaviors during the training sessions and at post-testing than they did at pre-testing. The other finding that can be seen in Table 25 is that the caregivers' use of all of the behaviors at delayed post-testing was not statistically different from their use at post-testing. This finding indicates that the caregivers were able to maintain their use of the behaviors targeted one week following the training. For three of the behaviors (text to life, interpretations and other book reading comments) there was also a main effect for group, with the MSES group producing the behaviors more than the LSES group.

Reference to print was the only behavior in which there was an interaction between the two variables (time and group). The groups were not statistically different at pre-testing, post-testing, or delayed post-testing; however during the training (Probe 1, Probe 2, and Probe 3) they were statistically different with the MSES group producing more references to print than the LSES group. The results also showed that the MSES group was able to incorporate spelling as early as Probe 1 into their reference to print behaviors and punctuation and sound manipulation at Probe 2 into their reference to print behaviors. In comparison, the LSES group only used spelling and it was not used until Probe 3.

Finally, further analysis of the other book reading comments showed that the MSES group produced a larger percentage of other book reading comments than the LSES group. Also, the MSES

groups' use of other book reading comments were judged to require more interaction from the children during book reading.

Table 25

Summary of Results

Behaviors	Significant Effects	Description of Findings
Tracking Print	Time	Pre-Testing < Probe 1, 2, 3 Post-Testing > Pre-Testing Post-testing = Delayed Post-Testing
Text to life	Time	Pre-Testing < Probe 1, 2, 3 Post-Testing > Pre-Testing Post-testing = Delayed Post-Testing
	Group	MSES > LSES with the exception of pre-testing. Rare production of behavior from either group at pre-testing.
Interpretations	Time	Pre-Testing < Probe 1, 2, 3 Post-Testing > Pre-Testing Post-testing = Delayed Post-Testing
	Group	MSES > LSES
Reference to Print	Interaction	MSES = LSES (Pre, Post, Delayed-Post) MSES > LSES (Probe 1, Probe 2, Probe 3)
		Pre-Testing < Probe 1, 2, 3 Post-Testing > Pre-Testing Post-Testing = Delayed Post-Testing
Other book reading comments	Time	Pre-Testing < Probe 1, 2, 3 Post-Testing > Pre-Testing Post-testing = Delayed Post-Testing
	Group	MSES > LSES

### Rating Profile

After the post testing session, each caregiver was asked to rate the training. Recall that the questionnaire had nine questions and assessed the caregivers' perceptions of the training program. The caregivers rated their perception of the program on a Likert type scale with scores ranging from 1 to 5



for each question. Table 26 provides the means, standard deviations, and ranges for each of the groups' total scores. As can be seen, the means on each of the items were high indicating positive beliefs about the program. The groups did not score significantly different on their perceptions of the program as measured by their total scores on the questionnaire  $F(1,19) = 2.04, p = .17$ . From an acceptability or likeability perspective, the training was viewed by both groups of caregivers as being a program that would help their children with literacy. Based on their ratings of the last three items on the questionnaire, both groups also believed they would use the strategies they learned (i.e., I am willing to use the strategies I learned; I am likely to use the strategies it requires little time to use; I am likely to use the strategies because believe I can use them effectively with the training I received).

### **Relationship Between Behaviors and Beliefs**

To examine the relationship between caregivers' beliefs and behaviors, correlational analyses were completed using the caregiver literacy beliefs gathered at pre-testing and the caregivers' behaviors at pre-testing. Only the Caregiver Literacy Beliefs Questionnaire was used for this analysis because this questionnaire showed differences between the beliefs of the two groups of caregivers.

The results showed that at pre-testing, the correlation between the total score on the caregiver literacy beliefs questionnaire and the total pre-testing behaviors was positive, but very low and not statistically significant,  $r = .08, p = .73$ . This finding was unexpected. However, it is important to note that at pre-testing the caregivers did not produce a lot of the targeted behaviors. At post-testing, the correlation between the total score on the caregiver literacy beliefs questionnaire and the total post-testing behaviors was again positive and visually higher than at pre-test but the magnitude of the relationship remained low and not statistically significant,  $r = .28, p = .24$ . Other literature has shown beliefs and behaviors to be correlated so exploratory analyses were completed to further examine the relationship between caregiver language-literacy behaviors and caregiver language-literacy beliefs.

First, the relationship between the total beliefs and each of the five behaviors were examined and none were found to be statistically significant at pre-test: tracking print,  $r = -.27, p = .26$ ; reference to print,  $r = -.03, p = .89$ ; text to life,  $r = .25, p = .29$ ; interpretations,  $r = .22, p = .35$ , other book reading comments,  $r = .23, p = .33$  or post-test: tracking print,  $r = -.27, p = .26$ ; reference to print,  $r = .30, p = .20$ ; text to life,  $r = .21, p = .37$ ; interpretations,  $r = .32, p = .17$ , other book reading comments,  $r = .40, p = .08$ . Given that the subset of the 10 items that assessed caregivers' beliefs about the most effective ways to share books with children were more closely related to the current study, the relationship between the total of the 10 items and each of the five behaviors was also examined. Again, none of the correlations were statistically significant at pre-test: tracking print,  $r = -.24, p = .30$ ; reference to print,  $r = -.15, p = .54$ ; text to life,  $r = .27, p = .25$ ; interpretations,  $r = .25, p = .28$ , other book reading comments,  $r = .28, p = .24$  or post-test: tracking print,  $r = -.27, p = .25$ ; reference to print,  $r = .26, p = .27$ , text to life,  $r = .21, p = .36$ , interpretations,  $r = .34, p = .15$ , other book reading comments,  $r = .36, p = .12$

To further examine the relationship between behaviors and beliefs the highest frequency of use which was during Probe 3 and the gain score from pre- to post-test were used as the behavioral measures and the total of the beliefs on the questionnaire was used as the measurement for beliefs. In both cases, correlations between the behavioral measures and the caregivers' total score on the questionnaire were not significant. The correlations were: highest frequency of use: tracking print, tracking print,  $r = -.10, p = .67$ ; reference to print,  $r = .34, p = .14$ ; text to life,  $r = .22, p = .36$ ; interpretations,  $r = .32, p = .17$ , other book reading comments,  $r = .34, p = .15$ ; gain score: tracking print,  $r = -.13, p = .58$ ; reference to print,  $r = -.30, p = .20$ ; text to life,  $r = .17, p = .47$ ; interpretations,  $r = .18, p = .44$ , other book reading comments,  $r = .36, p = .12$ .

Table 26

Means, Standard Deviations, and Ranges for the Rating Profile

Item	LSES M (SD)	MSES M (SD)
Most caregivers would find the training suitable for reading to four-year-old children.	4.27 (1.34) 1-5	4.33 (1.00) 3-5
Most caregivers would find this training beneficial for children younger than four-years-old.	3.64 (1.43) 1-5	4.00 (1.32) 2-5
My child has been able to participate more in book reading when I use the strategies taught in the training.	4.27 (1.01) 2-5	4.67 (.71) 3-5
This training should prove effective in helping my child with emergent literacy and becoming more familiar with books.	4.27 (.90) 3-5	5.00 (.00) -----
This would be an acceptable intervention for helping my child with literacy.	4.45 (.93) 3-5	4.89 (.33) 4-5
Overall the training will be beneficial to my child.	4.91 (.30) 4-5	5.00 (.00) -----
I am willing to use the strategies I learned with my child everyday.	4.55 (.82) 3-5	4.78 (.44) 4-5
I am likely to use the strategies because it requires little time to use.	3.36 (1.36) 1-5	4.00 (1.00) 2-5
I am likely to use the strategies because I believe I can use them effectively with the training I received.	4.27 (1.01) 3-5	5.00 (.00) -----
Total	38.00	41.67
(SD)	(7.21)	(2.87)
Range	26-45	36-45

## CHAPTER 5: DISCUSSION

Few studies have focused on the variability that exists within AA caregivers, and even fewer have examined AA caregivers' participation in caregiver training programs. This study was completed in an effort to fill this gap in the literature. To do this, the current study examined AA caregivers' beliefs about their children's language-literacy development and their behaviors with their children before, during, and after a three-day caregiver training program. This study also examined the link between the caregivers' beliefs about children's language-literacy development and their behaviors.

This chapter is divided into six sections. The first section presents the results as they relate to the research questions. The second section provides the contributions of the current study to the field. The purpose of the second section is to illustrate the gaps in the literature that have been filled by the current study. In the third section, the findings are compared to previous studies. The fourth and fifth sections present limitations of the current work and directions for future research. The sixth section offers clinical implications of the findings and discusses how the findings can be used to develop future caregiver training programs.

### Results of Research Questions

There were four research questions that guided the study. The first research question was, *Are there differences in the language-literacy beliefs of AA caregivers as a function of SES status?*

Previous research with EA caregivers indicates that their beliefs have an impact on how they engage their children in early literacy activities. Similar studies have not been conducted with AA caregivers so the current study attempted to fill this gap in the literature. Two questionnaires were used to examine whether differences existed between AA caregivers' beliefs about language-literacy development as function of SES. The findings were mixed in regard to this research question.

One questionnaire did not yield any differences between the two groups of caregivers. This questionnaire had been used in previous work and was shown to be sensitive to differences between caregivers (Weigel et al., 2006). One possible explanation for the differences across the two studies is that the groups in the current study were pre-determined based on levels of maternal education; however in the study of Weigel and colleagues, caregivers were placed in groups depending on their responses to the items on the questionnaire. Specifically, responses were subjected to a cluster analysis designed to sort the mothers into two groups (facilitative vs conventional) based on similar patterns of responses. The caregivers in the facilitative group of Weigel and colleagues believed that by reading books to their children they were providing their children with many opportunities to learn vocabulary, knowledge, morals, communication, and life skills and that taking an active role in teaching their children at home would result in better school outcomes. In comparison, the conventional mothers believed that preschoolers were too young to learn about reading, and that teaching children was the responsibility of the school rather than the parents. Another possible explanation for differences across these two studies may relate to the range of SES levels exhibited by the caregivers. Ninety-three percent of the caregivers in the work of Weigel and colleagues would be considered MSES: 35% had completed high school and some college, 24% had completed a four year college degree, and 34% had completed a graduate degree. Recall that the majority (n=8) of caregivers in the LSES group studied here completed high school and the majority (n=10) of their children were enrolled in some form of childcare. Thus, the sample of LSES caregivers studied here may not have been representative of caregivers who have less education than high school and less access to childcare.

The other questionnaire used from Bingham (2007) showed that the groups were different when the total on the questionnaire was used and when the analysis evaluated the items about how

children acquire literacy in the home environment. The caregivers in Bingham's study rated their agreement with statements included on the questionnaire using a scale of 1 to 6. The caregivers' in Bingham's study had a mean of 5.04 (.72) for the items that measured the most effective ways to share books with children and a mean of 5.03 (.47) for the items that measured how children acquire literacy in the home environment. The caregivers in both groups in the current study also rated their agreement with the statements on the questionnaire. For the items that measured caregivers' beliefs about the most effective ways to share books with children, the LSES group mean was 5.01 (.74) and the MSES group's mean was 5.63 (.54). For the items that measured beliefs about how children acquire literacy, the LSES group's mean was 5.24 (.62) and the MSES group's mean was 5.80 (.43). Although the majority of the caregivers in Bingham's study were EA and had high levels of education, the findings from the current study which included AA caregivers from LSES and MSES backgrounds are consistent with Bingham's findings. In the current study, this questionnaire showed differences between the two groups of caregivers for the total and for the items that measured how children acquire literacy in the home environment.

On one hand, the mixed findings suggest that these two groups of caregivers' differed in some, but not all aspects of their beliefs about children's language-literacy development. More specifically, the caregivers differed in their beliefs about how children acquire literacy in the home environment but did not differ in their beliefs about the most effective ways to share books with children. On the other hand, the mixed findings could suggest negligible differences between the caregivers.

The second research question asked, *Are there differences in the language-literacy behaviors of AA caregivers as a function of SES status?* This question was examined for five different behaviors during pre-testing (tracking print, text to life, interpretations, reference to print, and other book reading comments). The results were not the same for all of the behaviors. At pre-testing, both groups used

tracking print, text to life, and reference to print minimally. The results also showed that the groups' lengths of sessions were not different at pre-testing. Previous work with MSES EA caregivers and LSES AA has shown that during book reading most of these caregivers demonstrate minimal talking that extends beyond direct reading of the text (Britto et al., 2006; Ezell & Justice, 1998; Hammer et al., 2005; Justice & Ezell, 2000; Morgan & Goldstein, 2004). The results of the current study show that this pattern is the same for both groups of AA caregivers studied here. Results from the current study revealed that at pre-testing, both groups of caregivers primarily read from the text with little variation (LSES = 87% verbatim reading and MSES = 71% verbatim reading). In contrast, at pre-testing the MSES group produced more interpretations and other book reading comments than the LSES group.

The third research question asked, *Are there differences in the groups' use of behaviors within and following a caregiver training program as a function of SES status?* Again, this question was examined using five different behaviors, and the results were not the same across the five behaviors. For tracking print and regardless of SES group, the caregivers increased their use of this behavior with training. This result shows that both groups of caregivers were able to increase their use of tracking print with training. This finding was not surprising given that tracking print was the only nonverbal behavior targeted. As a nonverbal behavior, it was easy for the caregivers to use and required little training for the caregivers to incorporate the use of this strategy into their book reading activity.

For text to life, interpretations, and other book reading comments, the MSES group used the behaviors more during and after the training than the LSES group, even though both groups used the behaviors more during the probes and post-testing than they did at pre-testing. It was not surprising that the MSES group produced more interpretations and other book reading comments than the LSES group during and after training given that the MSES group produced more of these behaviors than the LSES group at pre-testing. Further, the MSES group had these behaviors in their repertoire and the

training was used to exacerbate the use of these behaviors, whereas for the caregivers in the LSES group, the training introduced these behaviors and the caregivers used the behaviors, but not at the same level as the caregivers in the MSES group. Also, previous studies done with AA caregivers from LSES backgrounds have shown these caregivers to use few of these types of utterances (Hammer et al., 2005; Pellegrini et al., 1990). For the first two behaviors, text to life and interpretations, the groups were shown to produce similar types of utterances; however this was not the pattern for the other book reading comments produced during the training probes. During the training probes, the MSES group not only produced more of these than the LSES group, but they also produced a greater range of different types of other book reading comments than the LSES group. For example, the MSES group produced more other book reading comments (i.e., additions of information, definitions, prior knowledge) that could have required a verbal response from the children. These book reading comments may have made book reading more interactive for the MSES group than for the LSES group.

During the training probes, of the LSES caregivers' other book reading comments, labels were produced with the highest frequency. This finding is consistent with previous literature that suggests that LSES AA caregivers produce a high percentage of labeling during book reading (Anderson-Yockel & Haynes, 1994; Hammer et al., 2005; Haynes & Saunders, 1998; Pellegrini et al., 1990). A comparison of LSES and MSES caregivers across studies also shows that LSES caregivers used more labels than their MSES counterparts (Anderson-Yockel & Haynes, 1994; Haynes & Saunders, 1998).

In comparison, during the training probes, of the MSES group's other book reading comments, affirmations were produced with the highest frequency, and affirmations were produced more by the MSES group than the LSES group. This finding is consistent with previous findings that have shown when AA caregivers are compared to each other in the same study, MSES AA caregivers use more



affirmations than LSES AA caregivers (Hart & Risley, 1995). This is also the case when AA caregivers are compared to each other across studies (Anderson-Yockel & Haynes, 1994; Haynes & Saunders, 1998). Finally, as found in the current study, other work has shown that LSES caregivers provide more negative feedback than their MSES counterparts (Anderson-Yockel & Haynes, 1994; Hart & Risley, 1995; Haynes & Saunders, 1998). More specifically, the LSES caregivers in the current study produced more prohibitions than the caregivers in the MSES group (6% and 2%, respectively).

Reference to print was the only behavior in which there was a group by time interaction. Similar to text to life, interpretations, and other book reading comments, the MSES group used reference to print more during the training than the LSES group; however at post-testing and delayed post-testing, there was not a significant difference between the two groups for this behavior. Nevertheless, the two groups produced different types of reference to print utterances during the training, and the MSES group produced these types of behaviors earlier in the training than did the LSES group (Training session 1 vs Training session 3).

To further explore these data, counts of the caregivers' behaviors were recalculated taking into account all of their utterances in the book reading samples. Recall that all previous analyses were controlled for time. The current analysis was not controlled for time but instead it examined each book reading session as an entire event. When this was done, the results indicated that at pre-testing, the LSES group produced 3,237 total utterances of which, 2,822 (87%) reflected verbatim reading, 11 (0%) reflected verbal behaviors targeted in the training program (i.e., text to life, reference to print, and interpretations) and 404 (13%) reflected other book reading comments (See Figure 10). In comparison, at pre-testing, the MSES group produced 3,354 total utterances of which 2,372 (71%) reflected verbatim reading, 106 (3%) reflected verbal behaviors targeted in the training program (i.e.,

text to life, reference to print, and interpretations) and 876 (26%) reflected other book reading comments (See Figure 11). Both groups produced a high proportion of verbatim reading and the groups were similar in the total number of utterances they produced. However, some differences were noted. First, the MSES group produced a larger proportion of other book reading comments (26% vs 13%) than the LSES group and the MSES group produced some of the verbal behaviors targeted in the training program.

Across the training probes, the LSES group produced 3,934 total utterances of which, 2,113 (54%) reflected verbatim reading, 530 (13%) reflected verbal behaviors targeted in the training program (i.e., text to life, reference to print, and interpretations) and 1,291 (33%) reflected other book reading comments. Across the training probes the MSES group produced 6,777 total utterances. Thus, they produced more utterances than the LSES group during their book reading sessions with their children. In addition, the MSES group's behaviors showed a different pattern than the LSES group because of their total utterances, 2,019 (30%) reflected verbatim reading, 1,548 (23%) reflected verbal behaviors targeted in the training program (i.e, text to life, reference to print, and interpretations) and 3,210 (47%) reflected other book reading comments. The highest percentage of utterances produced by the LSES group during training was verbatim reading. In comparison, for the caregivers in the MSES group, only 30% of their utterances during training reflected verbatim reading. Finally, the caregivers in the MSES group produced a larger proportion of other book reading comments than those in the LSES group, and they also used the verbal behaviors targeted in the program more than the caregivers in the LSES group (23% vs 13%).

At post-testing, the LSES group produced 4,522 total utterances of which 2,768 (61%) reflected verbatim reading, 1,119 (14%) reflected verbal behaviors targeted in the program and 635 (25%) reflected other book reading comments. At post-testing the MSES group produced 6,053 total

utterances. Thus, they produced more utterances than the LSES group during their book reading sessions with their children. Similar to what was found during the training, the MSES group's behaviors showed a different pattern at post-testing than the LSES group because of their total utterances, 2,398 (40%) reflected verbatim reading, 1,105 (18%) reflected verbal behaviors targeted in the program, and 2,550 (42%) reflected other book reading comments.

The highest percentage of utterances produced by the LSES at pre-testing was verbatim reading and verbatim reading continued to comprise over half of this group's utterances during the training and at post-testing. In comparison, although the highest percentage of utterances produced by the MSES at pre-testing was verbatim reading, a different pattern was seen for this group during and after training. More specifically, other book reading comments made up the majority of the MSES groups' total utterances during the training and at post-test. From pre-testing to post-testing, the amount of verbatim reading produced by the MSES group also decreased more (71% to 40%) than the amount of verbatim reading for the LSES group (87% to 61%). Thus, although both groups of caregivers benefited from training, greater change was evident in the MSES group.

Although these findings show group differences to exist, it is important to reiterate that for all five of the behaviors, both groups of caregivers increased their use of facilitative book reading behaviors with training. It is also important to note that for some of the behaviors the repertoire of the MSES group included the behaviors at pre-testing and the caregivers in the MSES group continued to use these behaviors more during and after the training (i.e., interpretations and other book reading comments). The fact that text to life utterances were used more by the MSES group during and after the training could be attributed to the MSES caregivers' book reading sessions being more interactive. For all five of the behaviors and for both groups, there also was not a statistically significant difference in the use of their behaviors from post-testing to delayed post-testing. This finding indicates that both

groups of caregivers continued to use each of the behaviors at the same rate approximately one week after training was completed.

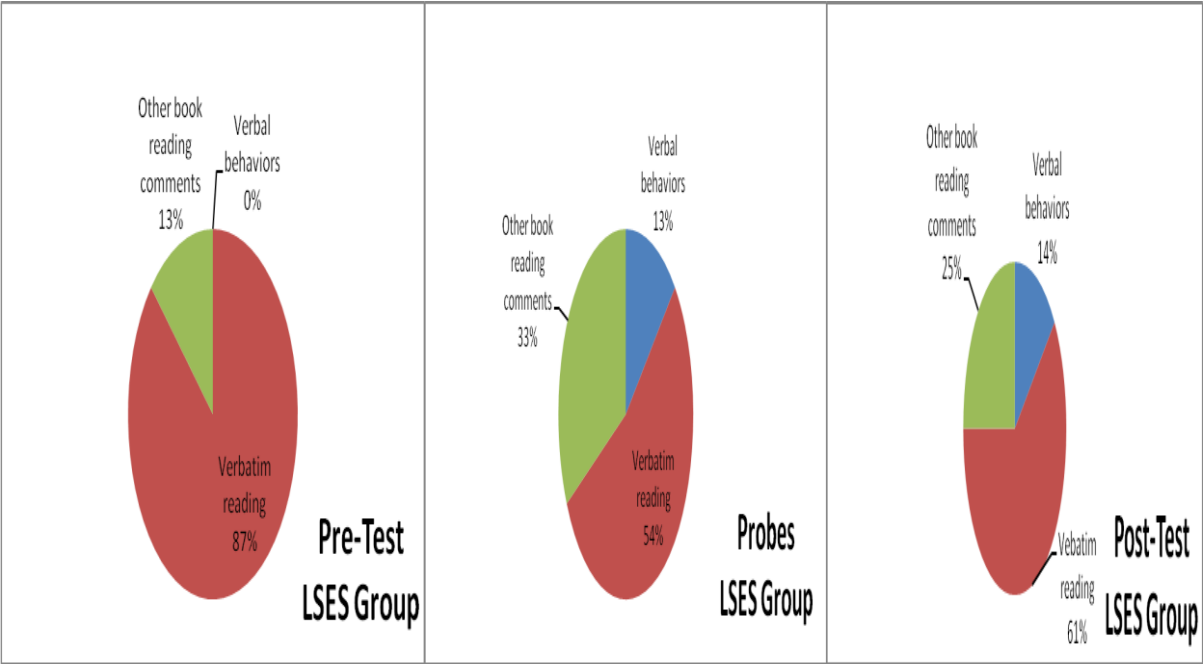


Figure 10. Total utterances for LSES Group

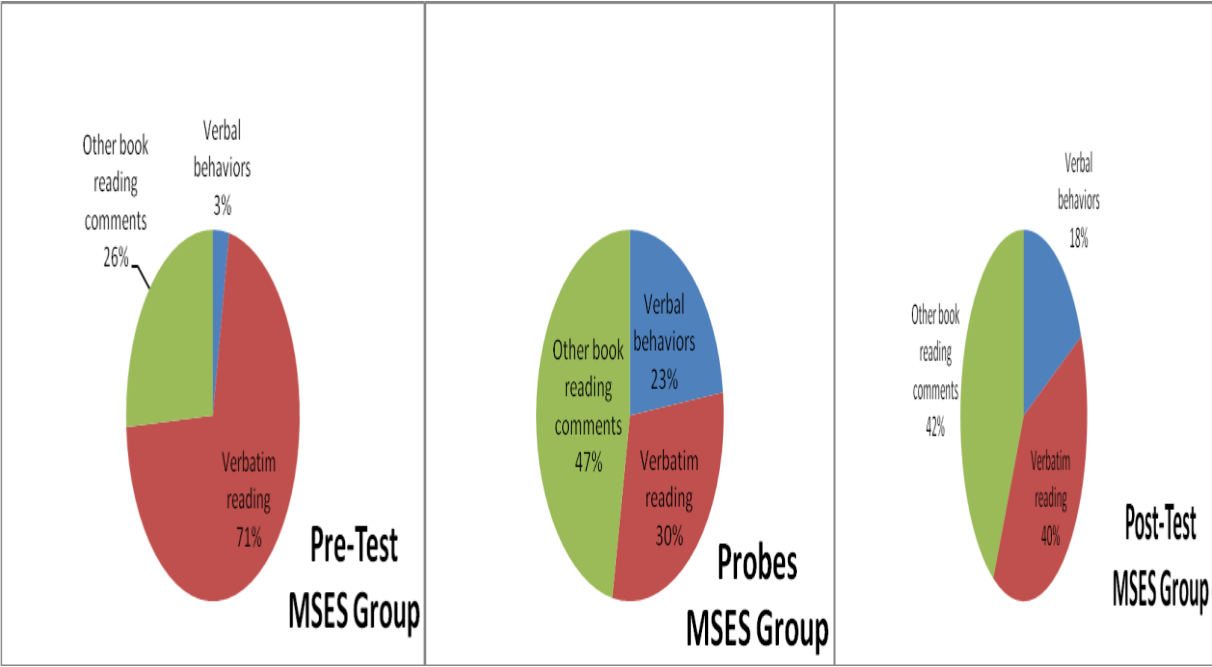


Figure 11. Total utterances for MSES Group

The final research question was, *Is there a link between the caregivers' language-literacy behaviors and their language-literacy beliefs?* In the current study one questionnaire was used to examine the link between the caregivers' beliefs about language-literacy development and their behaviors during book reading with their children. Unlike previous studies, the current results did not indicate a significant relationship between the caregivers' language-literacy beliefs and behaviors. One explanation for the differences across studies is that the current study did not examine the relationship in the same way as Bingham. He used a series of multiple regressions to examine the relationship between several variables including mother's educational attainment, their literacy beliefs, the home literacy environment, and the quality of mother-child joint book reading. In comparison, the current study used the same literacy beliefs as Bingham, but the caregivers' behaviors during book reading were directly measured. In comparison, some of the behaviors in Bingham's work were measured through observation (quality of mother-child book reading) and other behaviors were measured through self-report (i.e, frequency of home literacy activities, visits to the library, etc.).

Finally, the caregivers did not score significantly different from each other on their perceptions of the program as measured by their total score on a rating profile questionnaire. Both groups of caregivers viewed the training program as being helpful to their children in regards to language-literacy development. Also, both groups of caregivers believed that they would use the strategies they learned.

### **Contributions of the Current Study to the Field**

Caregiver training in the field of speech-language pathology continues to be underdeveloped. This study contributes to the literature in two ways. First, it adds information about variability in the AA community and second it provides some information on caregiver training methodology. As the

results indicate, the training led to desired changes in the caregivers' book reading behaviors, and for some caregivers, these behaviors included those targeted and not targeted in the training.

Recall from the literature review, that most of the work with AA caregivers has focused on caregivers from LSES backgrounds. The current study not only provides additional information on AA caregivers from LSES backgrounds, but it also provides information about AA caregivers from MSES backgrounds and shows both similarities and differences between MSES and LSES AA caregivers' book reading behaviors.

This work also contributes to the methodology of caregiver training programs for AA caregivers. Only one of the previous training studies included print referencing behaviors and decontextualized language strategies in the same study. Oetting and colleagues (2006) addressed both types of behaviors with AA caregivers from LSES backgrounds; however after four hours of group-based workshops, they found that none of their participants changed their language-literacy behaviors when they interacted with their children. Justice and colleagues targeted only print referencing behaviors, but did not include AA caregivers. Instead, Ezell and Justice's (2000) participants were speech-language pathology students and Justice and Ezell's (2000) participants were EA middle-income caregivers. In both studies, the adults were able to utilize print-referencing behaviors following training. The focus of other training programs has been limited to decontextualized language behaviors (Blom-Hoffman et al., 2006; Morgan & Goldstein, 2004). The current findings indicate that training programs can target both types of behaviors (i.e., print referencing and decontextualized language). Moreover, the current training program was a short (i.e., only three days of training), home-based, individual training program that included video, modeling, and practice with feedback. The results suggest that this method of training can lead to positive changes in caregivers' facilitative book reading behaviors. Restated, the findings from this study suggest that AA caregivers from both

LSES and MSES backgrounds are receptive to training programs and that shared book reading is an appropriate caregiver training target for the population studied here.

### **Limitations**

The findings of this study should be viewed as preliminary due to the limited number of caregivers studied. Small sample sizes result in reduced power and make it more difficult to detect group differences. Therefore, a reader cannot be certain that some group comparisons that were not significant in the current study may have been significant if more dyads were included in the sample. At the same time, the differences that were significant in the current study may be considered robust given the reduced power caused by the smaller sample size.

There are two limitations of the study that related to the caregivers. One involves the way the caregivers were grouped. Perhaps selecting groups that are more heterogeneous by selecting LSES caregivers who have not earned a high school diploma or using a variable other than maternal education to identify levels of SES among caregivers would help to address this limitation. Also, the participants in this study only included females. None of the dyads consisted of males in a caregiver role or as the child.

Another limitation related to the financial incentive that was given to the caregivers. Each participant received a \$100 Wal-Mart gift card for their participation and perhaps not surprisingly, the retention rate was 100%. Although several participants required encouragement to accept the incentive, it is unknown if the retention rate was tied to it.

Another limitation related to the recording methods used in the study. The caregivers and children were aware of the researcher's presence in the room and were aware that they were being videotaped. Therefore, the increases in the caregivers' use of facilitative book reading behaviors may have been tied to the presence of the researcher and the video camera in the session. A possible

solution for removing this potential confound would be to move the camera away from the caregiver or to use audio rather than video. For the current study, a video camera was held over the shoulder of the caregiver to capture tracking print. By not measuring tracking print, the video camera would not have been necessary. Alternatively, a diary method could be utilized by a researcher to monitor tracking print. Another possibility for decreasing the influence of the researcher on the results would be to use a touch screen computer with video and audio equipment built into the computer system. This would eliminate the need for a researcher to be present during recording.

### **Directions for Future Research**

Future studies should measure how caregivers' use of the facilitative book reading behaviors impact their children. It will also be important to examine the use of caregiver training with other groups, such as caregivers who do not speak English as their primary language, and with caregivers of children with language delays. This work could also be expanded by examining different components of the training in isolation. The current study combined several ways of presenting the same information to caregivers into one training program using video, modeling, and practice with feedback. Future research could examine whether one way of presenting the information is more effective than the others. After this type of work is done, then perhaps the combination of methods or the method that yields the most change in behaviors could be used with groups of caregivers because individual training is more expensive to conduct than group-based training. If practice with feedback is shown to be critical for increasing the caregivers' use of the behaviors, then a group approach should include the opportunity for practice and feedback.

Future studies should also examine ways other than financial incentives to maintain retention rates and cut costs of training programs. One possible way to decrease the cost of training programs is to use computers. Researchers could also determine if training programs can be carried out by



professionals other than speech-language pathologists. For example, often early childhood educators conduct caregiver workshops throughout the school year that address different topics. Perhaps they could incorporate these behaviors into those workshops.

### **Clinical Implications**

The findings of the current study demonstrate the appropriateness of book reading as a parent training target for AA caregivers because both groups were able to increase the length of their book reading sessions, and within these sessions, increase their ability to use a number of behaviors that are known to facilitate child language-literacy development. Nevertheless, the findings show that there is variability within AA caregivers as a function of their SES and this variability relates to some of their beliefs about language-literacy development and their ability to utilize the training to enrich their book reading with their children. Clinically, this finding indicates that there is overlap between MSES and LSES caregivers and this information is important in the development of training programs. For example, prior to implementing training programs perhaps clinicians should gather baseline data on how the participants are reading books to their children. Also, the findings from the current study suggest that some behaviors (i.e., tracking print) may not need to be targeted or practiced as much as others (i.e., text to life and interpretations) and depending on the intended group, some behaviors may need to be explicitly taught (i.e., sound manipulation, references to punctuation). Both groups of caregivers were able to utilize tracking print after the first day of training, whereas the caregivers in the LSES group never used sound manipulation or punctuation. For the caregivers in the LSES group, sound manipulation or references to punctuation may need to be explicitly taught in a training program.

The results of this study also suggest that during the training some caregivers, particularly the caregivers in the MSES group, were able to utilize different behaviors not targeted in the training and

they were able to use more text to life, interpretations, other book reading comments and reference to print behaviors than the LSES group. This finding could suggest that with caregivers from MSES backgrounds, three training sessions may not be necessary. This finding also suggests the need for researchers to further examine the home environment during this type of work to help establish why some caregivers particularly those from MSES backgrounds are able to maximize the benefits of the training.

Finally, the training program targeted two print referencing behaviors and two decontextualized language behaviors. All of the caregivers increased their use of these target behaviors. In addition to these increases, the results indicated that some of the other book reading comments that have been shown to facilitate language-literacy development increased as well. These findings indicate that targeting more than one behavior simultaneously can result in positive behavioral changes in caregivers.

## **Conclusions**

In summary, the AA LSES and MSES caregivers studied here were similar to each other and to other groups of caregivers. In particular, at pre-testing they were comfortable participating in book reading and during book reading, they mostly read from the text. Also, the current study showed that at pre-testing there are some differences as a function of SES within the AA community in their amount of use for some book reading behaviors, including interpretations and other book reading comments.

When participating in a book reading training program, the AA caregivers here were also like each other and other caregivers in their ability to increase the length of their sessions, and within these sessions, increase their ability to use tracking print, reference to print, text to life, and interpretations. The types of other book reading comments also increased as a result of the training. Nevertheless,

again the caregivers differed by SES in their ability to utilize, exploit, and make use of the training to improve their ability to use some skills, including reference to print, text to life, interpretations, and other book reading comments.

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## APPENDIX A: RECRUITMENT FLYER

Are you African American with a 4 or 5 year old daughter?

If your answer is YES,

**BE A PART OF AN EXCITING PROJECT THAT WILL TEACH YOU BOOKREADING STRATEGIES**

**TO HELP YOUR CHILD'S READING DEVELOPMENT.**

**WE ARE RECRUITING**

**MOTHERS WITH DAUGHTERS BETWEEN THE AGES OF 4 AND 5.**



**Families who participate will receive \$100!!!**

If you are interested, please complete this form and return it to your child's teacher. You will receive a follow up phone call once this form is received.

Name\_\_\_\_\_

Phone Number(s)\_\_\_\_\_

Address\_\_\_\_\_

Your Age\_\_\_\_\_

Please circle the highest grade you completed. (6=6<sup>th</sup> grade, 12=high school graduate, 16+=Bachelor's Degree or higher)

6      7      8      9      10      11      12      16+

## **APPENDIX B: CONSENT FORM**

1. Study Title: Behaviors and Beliefs of African American Caregivers as Related to Child Language-Literacy Development
2. Performance Sites: Homes of the families
3. Contact:  
Lekeitha R. Hartfield  
225-578-2545  
[lhartf2@tigers.lsu.edu](mailto:lhartf2@tigers.lsu.edu)  
  
Janna B. Oetting  
225-578-3932  
[cdjanna@lsu.edu](mailto:cdjanna@lsu.edu)
4. Purpose of the Study: This study will help us learn more about the ways African American caregivers read books to their children.
5. Subjects: Women who are the primary caregiver of a four-year-old child. The child is healthy and does not present with any developmental delays per primary caregiver report.
6. Mothers who are pregnant will not be included in the study. Any mothers who are receiving services for substance abuse or addiction or for other mental health related conditions will also be excluded from the study. Also, any caregivers who received special education services in school as reported by self-report will be excluded from this study.
7. Maximum number of subjects: 20 caregiver-child dyads
8. Study Procedures: I will visit your home and ask you to complete the Ages and Stages Questionnaire. I will also administer the Diagnostic Evaluation of Language Variation-Screening Test and an audiological screening test to your child.  
  
You will be asked to participate in four videotaped book reading activities with your child. You will also be asked to participate in 3 20-minute training sessions that will take place at your house.
9. Benefits: The research is intended to benefit you by teaching you behaviors that will help your child's reading development. It will also help us learn more about how African American caregivers read books with their preschoolers.

10. Risks/Discomforts: There are no significant risks associated with you or your child's participation in this study.
11. Right to Refuse: Participation in this study is voluntary. You and your child have the right to withdraw from the study at any time without penalty.
12. Privacy: You and your child's identity will remain confidential. You and your child will be assigned a number, and only this number will appear on the written documents. A key linking you and your child will be available only to those closely associated with the project. You and your child's identity will never be revealed in published articles or research reports.
- The video component of the tapes also will not be shared with the public. If you agree and the tapes appear useful for teaching future parents and professionals about caregiver-child interactions, we will use portions of your tape for teaching purposes only. The videotapes will not show you or your child's face.
13. Financial Information: There is no direct cost to you or your child for participating. We will give you six books during the course of the training and you will receive a \$100 Wal-Mart gift card. You will receive these books and a gift card even if you choose to withdraw from the study before it is over.
14. Withdrawal: You may choose not to participate or to withdraw from the study at any time with no penalty.
15. Removal: We reserve the right to discontinue your participation in the study if you share with us information during a session that indicates that you or your child no longer meet the qualifications for participation in the study.
16. Signatures: The study has been discussed with me and all my questions have been answered. I may direct additional questions regarding study specifics to the investigators. If I have questions about subjects' rights or other concerns, I can contact Robert C. Mathews, Chairman, LSU Institutional Review Board, (225) 578-8692. I agree to participate in the study described above and acknowledge the researchers' obligation to provide me with a copy of this consent form if signed by me.

---

Caregiver Signature

Date

Caregiver's Name \_\_\_\_\_

Please sign your name beside the statement that indicates your wishes.

\_\_\_\_\_ You may use the tape of my child  
and me for teaching purposes only.

\_\_\_\_\_ Do not use the tape of my child and  
me for teaching purposes.

### APPENDIX C: STORYBOOK TITLES AND FEATURES

Scores	The Sleepy Owl	Toot & Puddle: Charming Opal	Groundhog Stays Up Late	Pet Show	Clifford the Big Red Dog	Max Found Two Sticks	Goodnight Pippin	DW The Picky Eater	The Wolf's Chicken Stew	The Snowy Day	I Love My Hair	Peter's Chair	Big Mama's
FK Score	4.6	5.7	3.2	4.8	3.8	5.9	3.7	3.7	5.6	7	6.1	2.4	3.9
FK Score	2.2	4.1	3.1	3.7	2.7	5	4.9	4.5	3.7	5.6	3.5	5.0	3.4
<b>Average FK Score</b>	<b>3.4</b>	<b>4.9</b>	<b>3.2</b>	<b>4.3</b>	<b>3.3</b>	<b>5.5</b>	<b>4.3</b>	<b>4.1</b>	<b>4.7</b>	<b>6.3</b>	<b>4.8</b>	<b>3.7</b>	<b>3.7</b>
FRE Score	79	70	83	73	81	70	87	76	76	73	75	90	81
FRE Score	96	80	88	81	89	83	78	74	87	76	87	78	87
<b>Average FRE Score</b>	<b>87.5</b>	<b>75</b>	<b>85.5</b>	<b>77</b>	<b>85</b>	<b>77</b>	<b>83</b>	<b>75</b>	<b>82</b>	<b>74.5</b>	<b>81</b>	<b>84</b>	<b>84</b>

## **APPENDIX D: PAMPHLET**

### **4 Behaviors to Facilitate Language-Literacy Development**

Louisiana State University  
Communication Sciences and Disorders



This pamphlet describes and gives examples of the behaviors that will be targeted during the training program.

**By:**

**Lekeitha R. Morris**

**TRACKING THE PRINT**-This is when you run your fingers under the words as you read.



## **REFERENCES TO PRINT**

“ Comments about print

“ Requests about print

“ Questions about print

EXAMPLES:

This word says, “dog.”

What letter is this?

**TEXT TO LIFE UTTERANCES**-Any comments you use to relate the story to your child’s life.

Example: You have a dog at home.

Example: You remember when you went on vacation to Florida?



**INTERPRETATIONS**-These are things you say that require your child to make predictions and inferences about the book content, thought about character emotions, and opinion of the book.

Example: What do you think will happen next?

Example: Why do you think she’s sad?

## BEHAVIORS TARGETED IN THE PROGRAM



Remember to use these strategies when sharing books with your preschooler.

Tracking the print

References to print

Text-to-life utterance

Interpretations



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## APPENDIX E: CAREGIVER LITERACY BELIEFS QUESTIONNAIRE

For each statement, circle the number that best describes how you feel.	Strongly Disagree	Somewhat Disagree	Disagree	Agree	Somewhat Agree	Strongly Agree
	1	2	3	4	5	6
1. Parents should encourage children to help tell the story.	1	2	3	4	5	6
2. Parents should ask children a lot of questions about the book.	1	2	3	4	5	6
3. Parents should teach about the text.	1	2	3	4	5	6
4. Parents should encourage children to point out letters that are in the book.	1	2	3	4	5	6
5. Parents should talk about pictures as much as they read the story.	1	2	3	4	5	6
6. Parents should make stories real for children by relating story to his or her life.	1	2	3	4	5	6
7. Parents should try to sound excited so the child stays interested.	1	2	3	4	5	6
8. Parents should want their child to ask questions during reading.	1	2	3	4	5	6
9. Parents should make reading with their child an interactive experience.	1	2	3	4	5	6
10. Parents should make reading fun for the child.	1	2	3	4	5	6
11. Going to the library is important in teaching children about books.	1	2	3	4	5	6
12. Parents should provide children with many books in the home.	1	2	3	4	5	6

13. Children should be encouraged to draw and write on a regular basis.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
14. Parents should teach children the alphabet in the home.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
15. Parents should point out print in the home environment.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
16. Parents should involve the child in literacy-related routines, like making a grocery list.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
17. Children should have their own library card.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
18. Parents should play word games with their child.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
19. Parents should encourage children to love books.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
20. Children can learn important things about reading and writing in the home.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
21. Parents should provide children with crayons, pencils, and paper.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
22. Children learn important things through reading.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

## APPENDIX F: PARENTAL READING BELIEF INVENTORY

For each statement, circle the number that best describes how you feel.	Strongly Disagree	Somewhat Disagree	Agree	Somewhat Agree	Strongly Agree
	1	2	3	4	5
1. Children learn new words, colors, names, etc. from books.	1	2	3	4	5
2. I have good memories of being read to when I was a child.	1	2	3	4	5
3. Reading helps children be better talkers and better listeners.	1	2	3	4	5
4. Stories help build my child's imagination.	1	2	3	4	5
5. My child learns lessons and moral from the stories we read.	1	2	3	4	5
6. Reading helps my child learn about things they never see in real life (like Eskimos and polar bears).	1	2	3	4	5
7. My child learns important life skills from books (like how to follow a cooking recipe, how to protect themselves from strangers).	1	2	3	4	5
8. My child learns many important things from me.	1	2	3	4	5
9. I am my child's most important teacher.	1	2	3	4	5
10. Children do better in school when their parents also teach them things at home.	1	2	3	4	5
11. I enjoy reading with my child.	1	2	3	4	5
12. Reading with my child is a special time that we love to share.	1	2	3	4	5
13. I feel warm and close to my child when we read.	1	2	3	4	5

14. I read to my child whenever he or she wants.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
15. There is little I can do to help my child get ready to do well in school.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
16. I would like to help my child learn but I don't know how.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
17. Schools are responsible for teaching children, not parents.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
18. I find it boring or difficult to read to my child.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
19. I have to scold or discipline my child when we try to read.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
20. I don't read to my child because he or she won't sit still.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
21. My child is too young to learn about reading.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
22. Even if I would like to, I'm just too busy and too tired to read to my child.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
23. I don't read to my child because we have nothing to read.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
24. I don't read to my child because there is no room and no quiet place in the house.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
25. I don't read to my child because I have other, more important things to do as a parent.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
26. As a parent, I play an important role in my child's development.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
27. Parents need to be involved in their child's education.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
28. When my child goes to school, the teacher will teach my child everything my child needs to know so I don't need to worry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
29. Parents should teach children how to read	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

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before they start school.

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30. Some children are natural talkers, others are silent; parents do not have much influence over this.

**1**

**2**

**3**

**4**

**5**

---

31. Children inherit their language ability from their parents, it's in their genes.

**1**

**2**

**3**

**4**

**5**

---

32. I read with my child so he/she will learn the letters and how to read simple words.

**1**

**2**

**3**

**4**

**5**

---

## APPENDIX G: RATING PROFILE

<b>For each statement, circle the number that best describes how you feel.</b>	<b>Strongly Disagree</b>	<b>Somewhat Disagree</b>	<b>Agree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Most caregivers would find the training suitable for reading to four-five-year-old children.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2. Most caregivers would find this training beneficial for children younger than four and five years old.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
3. My child has been able to participate more in book reading when I use the strategies taught in the training.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4. This training should prove effective in helping my child with emergent literacy and becoming more familiar with books.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
5. This would be an acceptable intervention for helping my child with literacy.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
6. Overall the training will be beneficial to my child.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
7. I am willing to use the strategies I learned with my child everyday.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
8. I am likely to use the strategies because it requires little time to use.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
9. I am likely to use the strategies because I believe I can use them effectively with the training I received.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

## APPENDIX H: LOW-SES CAREGIVER

Within the transcript c = an utterance produced by the child and e = an utterance produced by the caregiver. Codes refer to the following behaviors: tracking print [tr]; reference to print [rp]; text to life [ttl]; interpretations [int]; other book reading comments [obc].

Pre-Test	Post-Test
<p>e the name of this book is sleepy owl by marcus (pfyer) pisfyer [obc].</p> <p>e the sleepy owl.</p> <p>e little owl lived deep in the woods.</p> <p>e all day long she perched on a branch sound asleep.</p> <p>e each evening as daylight faced she woke up.</p> <p>e she did not find getting up easy.</p> <p>e she was a bit sleepyhead.</p> <p>e little owl yawned and stretched her wings.</p> <p>e good evening everyone she said.</p> <p>e but there was no one around.</p> <p>e I wish I had woke up earlier.</p> <p>e the other owls have all gone and I have no one to play with.</p> <p>e little owl spread her wings and flew off (into the net) into the night sky.</p> <p>e far below her little owl saw a house.</p> <p>e I might find a playmate there she thought.</p> <p>e she swooped down onto (the window sill) the windowsill (taped on the glass) tapped on the glass with her (br*) beak.</p> <p>e the sound of the taps woke tom.</p> <p>e what do you want he said sleepily as he opened the window.</p> <p>e come and play with me, said little owl.</p> <p>e I'm much too sleepy.</p> <p>e it's the middle of the night.</p> <p>e come back tomorrow afternoon and we can play then.</p> <p>e how can I wake up in the day, said little owl.</p> <p>e I wake up only at night.</p> <p>e take my alarm clock.</p> <p>e as soon as you hear it go off flying straight over here.</p> <p>e little owl wondered how the metal contraption could help her.</p> <p>e (but she picked up it) but she picked it up in her claws and flew home.</p> <p>e back on her branch, little owl set the alarm clock</p>	<p>e the sleepy owl [tr].</p> <p>e where the alphabet o [rp]? e where e [rp]? e (where the) where a l at [rp]? e alphabet l [rp]. e that's not a l [rp]. e sleepy owl. e the little owl lived deep in the woods [tr]. e all day long she (pre* per*) preached on a branch sound asleep [tr]. e what the owl doing [obc]? c sleep. e each evening as daylight faded she woke up [tr]. e she did not find getting up easy [tr]. e she was a bit of a sleepyhead [tr]. e what she was [obc]? c a bit of a sleepyhead. e yeah [obc]. e the little owl yawned and stretched her wings [tr]. e good evening everyone she said [tr]. e but there was no one around [tr]. e I wish I had woke up earlier [tr]. e the other owls have all gone and I have no one to play with [tr]. e little owl spread her wings and flew off into the night sky [tr]. e what she wished [obc]? e she woulda what [obc]? c waked up longer. e earlier so she coulda did what [obc]? c played. e good [obc]. e where the alphabet g [rp]? e g [rp]. e that's a f cbasc114 [rp]. e g alphabet g [rp]. e that's a t [rp]. e that's a alphabet g right there [rp]. =caregiver answers the phone.</p>

<p>down beside her.</p> <p>e but now it was day so soon she fell asleep.</p> <p>e a terrifying noise woke her.</p> <p>e it almost made her fall off her branch.</p> <p>e the noisy yellow contraption ring shook as though it would never stop.</p> <p>e the noise woke (her) every owl in the woods.</p> <p>e what's the matter they shouted?</p> <p>e who makes that horrible noise?</p> <p>e owl (hates begin) hate being disturbed in the middle of the day.</p> <p>e little owl tried to stretch her wings.</p> <p>e but she was too tired and the sunlight hurts her eyes.</p> <p>e great tears fell down onto her feathers.</p> <p>e her aunt tried to comfort her.</p> <p>e don't cry she said.</p> <p>e if you get up in the time tonight you can play with us.</p> <p>e in his home, tom was waiting for little owl.</p> <p>e what had happened to his new friend?</p> <p>e why didn't she come?</p> <p>e be sensible tom, his mother said.</p> <p>e owls sleep by day and you sleep at night.</p> <p>e so how can the two of you play together?</p> <p>e why not finish painting your kite instead of moping about?</p> <p>e (so tom got his paint box and pretend and) tom forgot his paintbox and painted an owl face on his kite.</p> <p>e then he and his friend bob played with it all afternoon.</p> <p>e now tom had his own owl to play with and what more (his owl co*) his owl could fly just like his friend little owl.</p> <p>e that evening little owl woke up earlier and got up quicker than ever before.</p> <p>e she had to take the alarm clock back to tom.</p> <p>e near his house she (found they two) found the two boys flying the kite.</p> <p>e she saw the pictures of herself that tom had painted on it.</p> <p>e how nice!</p> <p>e time for bed, tom mother called.</p> <p>e tom (waved the) waved to little owl as she flew away.</p> <p>e he is still my friend even though we can play together, thought little owl.</p>	<p>e far below her, (li*) little owl saw a house [tr].</p> <p>e I might find a playmate there, she thought [tr].</p> <p>e what she saw down on the ground [obc]?</p> <p>e what she looked down and saw [obc]?</p> <p>c a moon.</p> <p>e show me the alphabet a [tr].</p> <p>e if you was a owl you'll sleep all day [ttl]?</p> <p>e you would [ttl]?</p> <p>e then you would not be able to play [ttl].</p> <p>e remember she slept all day then she missed out to play with her friends [obc].</p> <p>e she swooped down onto a windowsill and tapped on the glass with her beak [tr].</p> <p>e what she did on the glass [obc]?</p> <p>c tapped.</p> <p>e yep [obc].</p> <p>e the sound of the taps woke tom [tr].</p> <p>e what do you want he said sleepy as he opened the window [tr].</p> <p>e (come and play with me she said s* I mean) , come and play with me said little owl [tr].</p> <p>e I'm much too sleepy [tr].</p> <p>e it's the middle of the night [tr].</p> <p>e come back tomorrow afternoon [tr].</p> <p>e we can play then [tr].</p> <p>e how can I wake up in the day, said little owl [tr].</p> <p>e I woke up only at night [tr].</p> <p>e take my alarm clock [tr].</p> <p>e as soon as you hear it go off fly straight over here [tr].</p> <p>e what her friend gave her [obc]?</p> <p>c alarm clock.</p> <p>e for what [obc]?</p> <p>c for to wake her up.</p> <p>e yeah [obc].</p> <p>e so she could do^</p> <p>c and play.</p> <p>e yeah [obc].</p> <p>e the little owl wondered (how to) how the metal contraption (could) could help her [tr].</p> <p>e but she picked it up in her claws and (flew a*)flew home [tr].</p> <p>e back on her branch, little owl set the alarm clock down beside her [tr].</p> <p>e by now it was day (so sh*) so she soon fell asleep [tr].</p> <p>e what she did [obc]?</p> <p>c soon fell asleep.</p>
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<p>e and back home (into the w* in) in the woods (all the cl*) all the owls were awake and waiting to play with her.</p> <p>e that's the end of the story [obc].</p> <p>=caregiver switches to the second book.</p> <p>e charming opal.</p> <p>e charming opal by hollow hobbie.</p> <p>e in july puddle's little cousin opal come to woodcock (pock) pocket for a holiday.</p> <p>e (on her) on her first day, toot and poodle took (a) opal for a long walk in the sparkling woods.</p> <p>e the three of them played with the new purple ball.</p> <p>e she smelled every flower in the puddle garden.</p> <p>e that evening he had a cookout with corn on the cob and watermelon.</p> <p>e when puddle was tucking opal into bed she said (I love you I mean) I love to come to the woodcock pocket.</p> <p>e we love to have you here said puddle.</p> <p>e he added looks like you're going to lose a tooth pretty soon.</p> <p>e I know said opal.</p> <p>e I can hardly wait.</p> <p>e at breakfast opal said, look toot, my tooth (is) is so wobbly.</p> <p>e (would you like) would you like me to help it come out toot asked.</p> <p>e opal said I want it to come out all by itself.</p> <p>e they picked big beautiful strawberries in the morning.</p> <p>e (I don't think that the) I don't think that tooth can get any looser opal (said) puddle said.</p> <p>e it might fall out today, opal said laughing.</p> <p>e right during my vacation at the woodcock pocket.</p> <p>e in the afternoon they set off for pocket pond.</p> <p>e (last one in the) last one is the rotten egg, toot called (somersaulting) somersaulting into the water.</p> <p>e puddle made sure opal went second.</p> <p>e and all once puddle noticed that opal looked slightly different.</p> <p>e holy moly, he said.</p> <p>e your tooth!</p> <p>e yes opal loose tooth has fellen out at last night.</p> <p>e but where is it, opal asked.</p> <p>e looking anxious at the ground.</p>	<p>e show me the alphabet b [rp].</p> <p>e show me another b [rp].</p> <p>e that's not a b [rp].</p> <p>e show me another b [rp].</p> <p>e yeah [obc].</p> <p>e show me the alphabet e [rp].</p> <p>e that's not a e baby [rp].</p> <p>e show me the e's [rp].</p> <p>e yeah [obc].</p> <p>e a terrifying noise woke her [tr].</p> <p>e it almost made her fall off her branch [tr].</p> <p>e the noisiest yellowest contraption (and shook) and shook as through it would never stop [tr].</p> <p>e the noise woke every owl in the woods [tr].</p> <p>e what's the matter they shouted [tr]?</p> <p>e who's making that horrible noise [tr]?</p> <p>e owls hate being disturbed in the middle of the day [tr].</p> <p>e what that alarm clock did [obc]?</p> <p>c it shaked.</p> <p>e and did what [obc]?</p> <p>e woke up what [obc]?</p> <p>c them.</p> <p>e all the owls [obc]?</p> <p>e you need a alarm clock to wake you up in the morning for school [ttl]?</p> <p>e I'ma get one [ttl].</p> <p>e (the little owl) the little owl tried to stretch her wings [tr].</p> <p>e but she was too tired and the sunlight hurts her eyes [tr].</p> <p>e (great tear) great tears fell down onto (the) her feathers [tr].</p> <p>e her aunt tried to comfort her [tr].</p> <p>e don't cry she said [tr].</p> <p>e if you get up in time tonight you can play with us [tr].</p> <p>e in his home, tom was waiting for the little owl [tr].</p> <p>e (what happened I mean) what had happened to his new friend [tr]?</p> <p>e why hadn't she come [tr]?</p> <p>e what tom was looking in the window for [obc]?</p> <p>c for the owl.</p> <p>e to come so they could do what [obc]?</p> <p>c play.</p> <p>e be sensible tom, his mother said [tr].</p> <p>e owls sleep by day and you sleep at night [tr].</p>
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<p>e she was barely trying not to cry.  e (but where) why are you upset, said puddle.  e you've been hoping for your tooth to come out.  e but where is it, opal (opal) repeated.  e I have to put it under my pillow tonight.  e you don't asked toot.  e so that the tooth fairy will come she explained.  e I see puddles.  e we'll have to find that loose tooth.  e that loose tooth, toot said.  e they searched everywhere along the path and back through the house and all around the pond but opal tooth seems to have vanished.  e (I must I must have come out) it must has come out while you were in the water, (puddle deci*) puddle decided.  e then it's gone forever his little cousin said sadly.  e maybe not shouted toot.  e low and below on his third dive, toot spotted opal white tooth on the sand bottom of pocket pond.  e as puddle tucked his little cousin (into) into bed that night she carefully placed her tooth under her pillow.  e now the tooth fairy will come (while I'm at puddle at) while I'm at woodcreek pocket she said just as I hoped.  e sweet dreams says puddle.  e but he was worried.  e what's the matter (puddle I mean) puds toot asked.  e do you think the tooth fairy comes to woodcock pocket?  e I'm not sure toot said.  e maybe.  e but what if she don't?  e (opal) opal will be so unhappy.  e puddle devised a plan.  e they would stay awake and make sure the tooth fairy visit opal's bedroom.  e and if she didn't come to collect the precious tooth and leave a shiny new quarter in its place, puddle would do the task himself.  e I will be the tooth fairy, he declared.  e (how do) how do you be the tooth fairy, toot asked.  e an hour later puddle (returned in) returned to the living room.</p>	<p>e so how can the two of you play together [tr]?  e why not finish painting your kite instead of moping about [tr]?  e show me the alphabet o [rp].  e show me another one [rp].  e another one [rp].  e good [obc].  e so tom got out of his paintbox and painted an owl face on his kite [tr].  e then he and his friends bob played with it all afternoon [tr].  e now tom had his own owl to play with and what's more his owl could fly just like his friend little owl [tr].  e that evening little owl woke up earlier and got up quicker than ever before [tr].  e she had to take the alarm clock back to tom [tr].  e near his house she found the two boys flying the kite [tr].  e she saw the picture of herself that tom had painted on it [tr].  e how nice [tr]!  e time for bed, tom mom called [tr].  e tom waved to the little owl as she flew away [tr].  e he is still my friend even though we can play together, thought the little owl [tr].  e (what the owl br*) what he was bringing back to tom [obc]?  c a clock &lt;(clock)&gt;.  e &lt;for what&gt; [obc]?.  c for to wake up and play with him.  e and back home in the woods all the other owls were awake and waiting to play with her [tr].  e the end [obc].  =caregiver switches to the second book.  e charming opal.  e charming opal.  e in july puddle little cousins opal came to woodcock pocket (for the holi*) for a holiday [tr].  e what is those [obc]?  c pig.  e on her first day, toot and puddle took opal for a long walk in the sparkling woods [tr].  e there are three of them playing with her new purple ball [tr].  e what they playing with [obc]?  c purple ball.  e she smelled every flower in puddle's garden [tr].</p>
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<p>e I'm the tooth fairy, he announced.</p> <p>e I'm the believer.</p> <p>e (quite believ*), quiet believer (toot had I mean) toot told him.</p> <p>e now let's (turn off the) turn out the lights and wait for the tooth fairy to arrive, puddle said.</p> <p>e oh no, said puddle.</p> <p>e we both fell asleep!</p> <p>e (do you hear anything) did you hear anything during the night, toot asked.</p> <p>e not a sound, puddle said.</p> <p>e it's too late for me to be the tooth fairy.</p> <p>e they heard opal calling from the other room.</p> <p>e I'm afraid it's too late, said toot.</p> <p>e toot and puddle stepped (nervous) nervously into the guest bedroom.</p> <p>e good morning opal, they said together.</p> <p>e ( it was) it was thinking, puddle began, if the tooth fairy did not come it's because she did not know exactly where woodcock pocket was after all.</p> <p>e and it was thinking said toot, if the tooth fairy didn't come it would just be a nice to keep the wonderful tooth (of yourself) of yours and yourself.</p> <p>e but guess what, opal said.</p> <p>e the tooth fairy did come!</p> <p>e grinning happily she held out a shiny new quarter for toot and puddle to see.</p> <p>e the end [obc].</p> <p>=caregiver switches books.</p> <p>e groundhog stay up late by margary (sisler) susler.</p> <p>e groundhog stays up late.</p> <p>e groundhog was not the kind of groundhog who liked to hibernate.</p> <p>e to him making a winter burrows was boring.</p> <p>e gathering and store food was boring.</p> <p>e and most of all sleeping all winter long was boring.</p> <p>e instead of preparing for winter he liked to play hide and seek with the rabbits.</p> <p>e possums and octopus.</p> <p>e possums and what?</p> <p>e octopus.</p> <p>e (and the tag) and tag with bumblebees.</p> <p>c xxx.</p> <p>e why do you even bother to hibernate chattered squirrel.</p>	<p>e that evening they had a cookout with corn on the cob and watermelon [tr].</p> <p>e what they was eating [obc]?</p> <p>c corn on the cob with watermelon.</p> <p>e yeah [obc].</p> <p>e when puddle was tucking opal into bed she said I love to come to woodcock pocket [tr].</p> <p>e we love to have you here said puddle [tr].</p> <p>e (he added it) he added it looks like you're going to lose a tooth pretty soon [tr].</p> <p>e I know opal said proudly [tr].</p> <p>e I can hardly wait [tr].</p> <p>e what opal fitna lose [obc]?</p> <p>c a tooth.</p> <p>e you ever lost a tooth [ttl]?</p> <p>e &lt;good&gt; [obc].</p> <p>c &lt;I'm&gt; about to.</p> <p>e where [ttl]?</p> <p>e where girl [ttl]?</p> <p>e let me see [obc].</p> <p>e girl you ain't about to lose no tooth [ttl].</p> <p>e at breakfast opal said, look toot, (my tooth is s*) my tooth is so wobbly [tr].</p> <p>e show me the (o) alphabet o [rp].</p> <p>e what opal said was wrong with her tooth [obc]?</p> <p>c it wobbly.</p> <p>e (would you) would you like me to help it come out, toot asked [tr].</p> <p>e opal said I want it to come out all by itself [tr].</p> <p>e they picked big beautiful strawberries in the morning [tr].</p> <p>e what they pick [obc]?</p> <p>c big beautiful strawberries in the morning.</p> <p>e I don't think that tooth can get any looser opal, puddle said [tr].</p> <p>e it might fall out today, opal said laughing [tr].</p> <p>e right during my vacation at woodcock pocket [tr].</p> <p>=caregiver tells child to go get some tissue.</p> <p>e in the afternoon they set off for pocket pond [tr].</p> <p>e the last one is a rotten egg, toot called somersaulting into the water [tr].</p> <p>e puddle made sure opal went second [tr].</p> <p>e what they jumping into [obc]?</p> <p>c in the water.</p> <p>e they fitna go what [obc]?</p> <p>c swimming.</p> <p>e yeah [obc].</p>
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<p>e (you're never ready for win* I mean) you're never ready when winter comes.</p> <p>e you should be looking for nuts and seeds right now.</p> <p>e I don't think I'll hibernate this groundhog.</p> <p>e but you have to, said badger.</p> <p>e how else will you (wake up for february) wake up on february second and look out your shadow well known when spring is coming?</p> <p>e (I don't need to hibernate) I do not need to hibernate to do that, said groundhog.</p> <p>e bear shook his shaggy head.</p> <p>e well don't expect us to give you shelter (in snows) when it snows.</p> <p>e our food when you get hungry said squirrel.</p> <p>e or warmth when you get cold, said badger.</p> <p>e soon it begins to snow.</p> <p>e wow snow, yelled groundhog.</p> <p>e time&gt;.</p> <p>e (oh) I done skipped a whole part [obc].</p> <p>e finally winter came.</p> <p>e groundhog friends curled up into their homes for the long winter naps.</p> <p>e (but excuse me) but not groundhog.</p> <p>e he stayed outside.</p> <p>e soon it begin to snow.</p> <p>e wow snow, yelled groundhog.</p> <p>e time to play.</p> <p>e (hare ran by) hare ran by.</p> <p>e want to make a snowman, asked groundhog.</p> <p>e no silly said hare.</p> <p>e I'm racing to my wildpile (until) until the storm's over.</p> <p>e weasel ran by.</p> <p>e want to have a snowball fight, said groundhog.</p> <p>e forget it said weasel.</p> <p>e I'm scampering to my hole where it's warm.</p> <p>e fox ran by.</p> <p>e want to build a snow fort, asked groundhog.</p> <p>e (no not) not now, said fox.</p> <p>e I'm running to my den to get dry.</p> <p>e what a bunch of (stick-in-the he*) stick-in-the-mud said groundhog.</p> <p>e as the week passed, groundhog built a snowman, threw snowballs at the trees, and made a snow fort.</p> <p>e but groundhog was getting very hungry.</p> <p>e and very thin which made him very cold.</p>	<p>e you swims [ttl]?</p> <p>e no you ain't [ttl].</p> <p>e (you scared of wa*) you scared [ttl].</p> <p>e all at once puddle noticed that opal looked slightly different [tr].</p> <p>e holy moly, he said [tr].</p> <p>e your tooth [tr]!</p> <p>e yes opal's loose tooth had fellen out at last [tr].</p> <p>e but where is it, opal asked looking astonishly at the ground [tr].</p> <p>e she was barely trying not to cry [tr].</p> <p>e (where are y*) why are you upset, puddle asked [tr].</p> <p>e (you've been hopping for) you've been hoping for your tooth to come out [tr].</p> <p>e but where is it, opal repeated.</p> <p>e (I have) I have to put it under my pillow tonight [tr].</p> <p>e you do asked toot [tr].</p> <p>e so the tooth fairy will come she explained [tr].</p> <p>e (I see the) I see said puddle [tr].</p> <p>e we'll have to find that loosen tooth [tr].</p> <p>e the last tooth, toot said [tr].</p> <p>e show me the alphabet t [rp].</p> <p>e show me another one [rp].</p> <p>e if your tooth fall out you go wanna put it under your pillow [ttl]?</p> <p>e why [int]?</p> <p>c because I don't wanna lose it so it can grow back in.</p> <p>e oh [obc].</p> <p>e they searched everywhere along the path and back at the house and all around the pond but opal tooth seems to have vanished [tr].</p> <p>e (I must have come it) it must have come out while you were in the water, puddle decided [tr].</p> <p>e (then it) then it's gone forever his cousin said sadly [tr].</p> <p>e maybe not shouted toot [tr].</p> <p>e low and below on (on) his third dive, toot spotted opal's white tooth on the sandy bottom of pocket pond [tr].</p> <p>e as puddle tucked his little cousin into bed that night she carefully placed her tooth under her pillow [tr].</p> <p>e now the tooth fairy will come while I'm at woodpot pocket she said just as I hoped [tr].</p> <p>e sweet dreams said puddle [tr].</p>
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<p>e and most of all, it was getting very lonely.  e so one day just before christmas, he padded over  to badger's burrow.  e may I come in he called?  e badger opened one eye.  e no I'm too busy sleeping.  e groundhog scurried to squirrel's hole.  e hello squirrel he said.  e how about sharing a few nuts.  e squirrel twitched his tail.  e not now, I said.  e I'm taking a nap.  e come back in spring.  e groundhog finally (borrowed) burrowed through  the snow to bear's cave.  e wake up bear.  e it's me groundhog called.  e bear turned over and wiggled one ear.  e go away he growled.  e I warned you I'm not to be bothered.  e poor groundhog.  e so hungry.  e so cold.  e so lonely.  e all night long he stayed awake.  e but that night as he shivered and shook he begin  to get a idea.  e an idea that would put food in his belly and  (give) give him friends to play with.  e a few days later, the sun came out and the snow  started to melt.  e groundhog climbed on top of (ho*) hollow hill  and pointed his nose into the sky.  e he opened his mouth and yelled spring comes  early!  e let's celebrate!  e the animals poked their heads out of their dens.  e (they) they wriggled out of the barrows.  e they crawled out of their holes.  e how wonderful to have an early spring.  e (even though it was cold) even though it was  cold and there were patches of snow on the  ground, spring was on its way.  e they gathered their food they had stored in the  fall and carried it outside.  e groundhog was waiting for them.  e happy spring he lied.  e I don't see my shadow so spring is coming early.</p>	<p>=caregiver comments about her back hurting.  e but he was worried [tr].  e what's the matter puds toot asked [tr].  e do you think the tooth fairy comes at woodcock  pocket [tr]?  e I'm not sure toot said [tr].  e maybe [tr].  e but what if she doesn't [tr]?  e opal will be so unhappy [tr].  e puddle devised a plan [tr].  e they would stay awake and make sure the tooth  fairy visit (opal) opal bedroom [tr].  e and if she didn't come to collect the precious  tooth and leave a shiny new quarter in its place,  puddle would do the task hisself [tr].  e I will be the tooth fairy, he declared [tr].  e (how do you) how do you be the tooth fairy, toot  asked [tr].  e look at me when I'm reading the book [obc].  e an hour later puddle returned to the living room  [tr].  e I'm the tooth fairy, he announced [tr].  e I am the believer [tr].  e quiet believer (tooth fairy) toot told him [tr].  e now let's turn out the lights and wait for the  tooth fairy to arrive, puddle said [tr].  e you better pay attention to me [obc].  e oh no, said puddle [tr].  e we both fell asleep [tr]!  e (do you hear anything) did you hear anything  during the night, toot asked [tr].  e not a sound, puddle said [tr].  e it's (too late for me to be to for) too late for me  to be the tooth fairy [tr].  e they heard opal (cry out) calling them (for the)  from the other room [tr].  e I'm afraid it's too late, said toot [tr].  e show me the alphabet s [rp].  e that's not no s cbasc114 [rp].  e show me a s [rp].  e I'ma make you go back there and write your  alphabets again [obc].  e show me another one [rp].  e you not go ride that (scoo*)&gt;  e oh [obc].  e toot and (pood pod) puddle stepped nervously  into the guest bedroom [tr].  e good morning opal, they said together [tr].</p>
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<p>e let's eat.  e (hurry ye*) hurry yelled bear.  e hurry shout (the other) the other animals.  e they laid all their food on one big stump.  e groundhog dove into the dried berries and nuts and seeds.  e soon everyone was eating and celebrating.  e it was until something unexpected started to happen.  e a snowflake fell from the sky.  e and another one.  e and another one.  e soon the snow was swirling around them like tiny stars.  e I thought spring was coming early this year, complied the squirrel.  e I'm getting very cold and very tired all of a sudden, moaned bear.  e I need to take a nap, said badger.  e squirrel skittered back into her hole looked at his calendar.  e it was only january the second.  e groundhog played a trick on us he yelled.  e it's not february the second.  e groundhog day is a whole month away.  e what a nasty trick cried the animals.  e groundhog should be punished.  e (but) but groundhog did not hear them.  e he was so sleepy after his big meal he had (curled) crawled into his barrow and (fell asleep fastly) had fallen fast asleep.  e as he slept and he slept right up until february the second when his eyes popped open for groundhog day.  e he stepped (out of his) out into the fresh air.  e the snow had melted, the birds were singing, and buttercups dropped the woods with color.  e it's spring said groundhog.  e (when will he looked down at the ground) but when he looked down at the ground, he saw his shadow.  e it looked a little strange it was a funny color but it had not to be his.  e nuts he said.  e six more weeks of winter .  e (he) and he returned to his burrow and went back to sleep.  e the other animals came out of their hiding place.</p>	<p>e I was thinking, puddle began, if the tooth fairy did not come it's because she did not know exactly where woodcock pocket was after all [tr].  e and I was thinking said toot, if the tooth fairy didn't come it would be just as nice to keep that wonderful tooth of (your) yours yourself [tr].  e the tooth fairy didn't come get the tooth [int]?  e why you think he didn't come [int]?  c because.  e but guess what, said opal [tr].  e the tooth fairy did come [tr]!  e grinningly happily she held up a shiny new quarter for toot and puddle to see [tr].  e (oh) what she happy for [obc]?  c her quarter.  e where she get a quarter from [obc]?  c from x.  e from where [obc]?  c the man that (got) got the teeth.  e the end [obc].  =caregiver asks child to go throw something away and talks to researcher about various topics.  =caregiver switches books.  e show me the alphabet n [rp].  e that is a u baby [rp].  e show me a n [rp].  e that's a y [rp].  e cbasc114 now I know you know your alphabets [obc].  e you not go ride that scooter [obc].  e yeah [obc].  e see I know you know [obc].  e you just want me to fuss don't it [obc]?  e I think you like for me to fuss at you [obc].  e groundhog day stay up late.  e groundhog was not the kind of groundhog who liked to hibernate [tr].  e to him making a winter burrow was boring [tr].  e gathering and storing food was boring [tr].  e and most of all sleeping all winter long was boring [tr].  e instead of preparing for winter he liked to play hide and seek (with the other rabbits I mean) with the rabbit [tr].  e (what that) what he playing [obc]?  c hide go seek with the rabbits.  e you ever played that [ttl]?  e who you played it with [ttl]?</p>
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<p>e our trick worked said badger.  e the shadow was painted sure fooled groundhog.  e while groundhog slept through spring, his friends  enjoyed the sun warming their fur and the breeze  ruffling their trees.  e but did groundhog learn his lesson?  e no!  e the end [obc].</p>	<p>c noon.  e and who else [ttl]?  c gavin.  e you was hiding or you had to count [ttl]?  c I had to count and hide.  e for real [obc]?  e (possums was I mean) possums with the (what)  opossums and tag with the bumblebees [tr].  e why do you even bother to hibernate chattered  squirrel [tr].  e you never ready when winter come [tr].  e you should be looking for nuts and seeds right  now [tr].  e I don't think I'll hibernate this year, said  groundhog [tr].  e but you have to, said badger [tr].  e how else would you wake up on (february  second that's granny birthday) february the  second and look at your shadow so well know  when your spring is coming [tr]?  e show me the alphabet c [rp].  e show me the alphabet s [rp].  e okay [obc].  e I don't need to hibernate to do that, said  groundhog [tr].  e bear shook his (sh*) shaggy head [tr].  e well don't expect us to give you shelter when it  snows [tr].  e or food when you get hungry said squirrel [tr].  e or warmth when you get cold, said badger [tr].  e finally winter (come) came [tr].  e groundhog friends curled up into their homes for  the long winter naps [tr].  e but not groundhog [tr].  e he stayed outside [tr].  e soon it began to snow [tr].  e wow snow, yelled groundhog [tr].  e time to play [tr]!  e what the groundhog doing [obc]?  c playing in the snow.  e you played in the snow [ttl]?  e you too scared [ttl].  e you ain't played in no snow [ttl].  e you scared [ttl].  c I did.  e you did [obc]?  e you had fun [ttl]?  e where I was at [obc]?</p>
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	<p> c you was gone with somebody.  c you was gone with tomeke.  e where you was at [obc]?  c outside me and noon.  e (where) here by yallself and yall went  outside[obc]?  c you told us we^  c (you) you was there.  e (oh) I was right here in the house [obc]?  c yeah.  e you just said I was gone [obc].  e you'll have people think I leave yall here [obc].  e hare ran by [tr].  e want to make a snowman, asked groundhog [tr].  e no silly said hare [tr].  e I'm racing to my woodpile until the storm is over  [tr].  e the rabbit running to go hide [obc].  e weasel ran by [tr].  e want to have a snowball fight, asked groundhog  [tr].  e forget it said weasel [tr].  e (I'm scrapping) I'm scrapping to my hole where  it's warm [tr].  e fox ran by.  e want to build a snow fort, asked groundhog.  e not now, said fox.  e (I'm running to) I'm running to my den to get dry.  e (when a bunch when) what a bunch of (stick-in-  the) stick-in-the muds, said groundhog.  e (I) as the weeks passed, groundhog built a  snowman, threw snowballs at the trees, and made  a snow fort [tr].  e what's that [obc]?  c a snowman.  e and what the squirrel was doing to the snowman  [obc]?  c throwing it.  c fixing it.  e throwing what [obc]?  e &lt;snow&gt; [obc].  c &lt;throwing&gt; snowballs to it.  e okay [obc].  e but groundhogs was getting very hungry [tr].  e and very thin which was making him very cold  [tr].  e and most of all, he was getting very lonely [tr].  e so one day just before christmas, he padded over </p>
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	<p> to badger's burrows [tr].  e may I come in he called [tr]?  e badger opened one eye [tr].  e no I'm too busy sleeping [tr].  e what the badger doing [obc]?  c sleep laying down.  e groundhog (cicered I mean scurred) scurried to  squirrel's hole [tr].  =caregiver asks researcher a word.  e hello squirrel he said [tr].  e how about sharing a few nuts [tr].  e squirrel twitched his tail [tr].  e not now, he said [tr].  e I'm taking a nap [tr].  e come back in the spring [tr].  e show me the alphabet r [rp].  e got a lot of r's [rp].  e (show it) show me the r [rp].  e yeah [obc].  e good [obc].  e show me a a [rp].  e good [obc].  e groundhog finally burrowed through the snow to  bear's cave [tr].  e wake up bear [tr].  e it's me groundhog he called [tr].  e bear turned over and wiggled one ear [tr].  e go away he growled [tr].  e I warned you don't bother me [tr].  e poor groundhog [tr].  e so hungry [tr].  e so cold [tr].  e so lonely [tr].  e all night long he stayed awake [tr].  e but the night as he shivered and shook he begin  to get an idea [tr].  e an idea that would put food in his belly and (give  him) give him friends to play with [tr].  e a few days later, the sun came out and the snow  started to melt [tr].  e groundhog climbed on top of the hollow hill and  pointed his nose to the sky [tr].  e he opened his mouth and yelled spring come out  early [tr]!  e let's celebrate!  e the animals poked their heads out of their dens  [tr].  e (their) they wiggled out of their burrows [tr]. </p>
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	<p> e they crawled out of their holes [tr].  e how wonderful to have an early spring [tr].  e even though it was cold and there was patches  of snow on the ground, spring was on its way [tr].  e they gathered the food they had stored in the  fall and carried it outside [tr].  e what they did to they food [obc]?  c carried them outside.  e groundhog was waiting for them [tr].  e (it was I mean) happy spring he lied [tr].  e I did not see my shadow so spring is coming early  [tr].  e let's eat [tr].  e hurry yelled bear [tr].  e hurry shouted the other animals [tr].  e they laid all of their food on a big stump [tr].  e groundhog dove into the dried berries and nuts  and seeds [tr].  e soon everyone was eating and celebrating [tr].  e that is until someone unexpected started to  happen [tr].  e a snowflake fell from the sky [tr].  e and the other animals.  e and another [tr].  e soon the snow was swirling around them like  tiny stars [tr].  e I thought spring was coming earlier this year,  (complain I mean) complained squirrel [tr].  e I'm getting very cold and very tired all of a  sudden, moaned bear [tr].  e I need to take a nap, said badger [tr].  e squirrel skirted back into his hole and looked at  his calendar [tr].  e it was only january the second [tr].  e groundhog played a trick on us he yelled [tr].  e it's not february the second [tr].  e groundhog's day (it is a) it is a whole month  away [tr].  e what a nasty trick cried the animals [tr].  e groundhog should be punished [tr].  e what the groundhog did [obc]?  c played a trick.  e tricked the other animals for what [obc]?  c that it was^  e february [obc].  c &lt;february&gt;.  e &lt;so&gt; they could eat [obc]?  c yeah. </p>
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	<p>e but groundhog did not hear them [tr].</p> <p>e he was so sleepy after his big meal that he had crawled into his burrow and had (fell) fallen fast asleep [tr].</p> <p>e as he slept (and) and he slept right until february the second (when he opened) when his eyes popped open for groundhog day [tr].</p> <p>e (he stepped out of) he stepped out into fresh air [tr].</p> <p>e the snow had melted, the birds were singing, the buttercups dotted the wood with color [tr].</p> <p>e it's spring said groundhog [tr].</p> <p>e but when he looked down at the ground, he saw his shadow [tr].</p> <p>e and it looked a little strange it was a funny color but it had to be his [tr].</p> <p>e nuts he said [tr].</p> <p>e six more weeks of winter [tr].</p> <p>e he returned into his burrow and went back to sleep [tr].</p> <p>e the other animals came out of their hiding place [tr].</p> <p>e our trick worked said badger [tr].</p> <p>e that shadow was (painted so) painted sure fooled groundhog [tr].</p> <p>e what his friends did to him [obc]?</p> <p>e they tricked him for what [obc]?</p> <p>e &lt;because&gt; he did what [obc]?</p> <p>c &lt;it was&gt; it was snow.</p> <p>e huh [obc]?</p> <p>c it was snow.</p> <p>e show me the alphabet t [rp].</p> <p>e show me the alphabet p [rp].</p> <p>e that's a h [rp].</p> <p>e show me the alphabet p [rp].</p> <p>e (you ever) somebody ever played a trick on you [ttl]?</p> <p>c no.</p> <p>e (while ground) while groundhog slept through spring, his friends enjoyed the summer warming their fur and the breeze ruffling through the trees [tr].</p> <p>e but did groundhog learn his lesson (excuse me) [tr]?</p> <p>e the end [obc].</p> <p>e no!</p> <p>e the groundhog learned his lesson [obc]?</p> <p>e he did [obc]?</p>
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	<p>e oh [obc]? e you liked that book [int]? e &lt;you did&gt; [int]? c &lt;all of it&gt;. e what's the best part you liked [int]? c when he had^ e where they played the trick on him [obc]? e want me to play a trick on you [ttl]? e okay [obc].</p>
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## APPENDIX I: MIDDLE-SES CAREGIVER

Within the transcript c = an utterance produced by the child and e = an utterance produced by the caregiver. Codes refer to the following behaviors: tracking print [tr]; reference to print [rp]; text to life [ttl]; interpretations [int]; other book reading comments [obc].

Pre-Test	Post-Test
<p>e okay [obc].</p> <p>e what you think this book is called [int]?</p> <p>e what the owl look like it's doing [obc]?</p> <p>c the sleepy owl.</p> <p>e uhhuh [obc].</p> <p>e the sleepy owl.</p> <p>e what do you think it's gonna be about [int]?</p> <p>e let's see [obc].</p> <p>e little owl lived deep in the woods.</p> <p>e all day long she (perched on a branch and sound) perched on a branch sound asleep.</p> <p>e I like her colors [obc].</p> <p>e each evening as daylight (fade) faded she woke up.</p> <p>e (uhm) one eye at a time [obc].</p> <p>e she did not find getting up easy.</p> <p>e she was a bit of a sleepyhead.</p> <p>e who's a bit of a sleepy head [ttl]?</p> <p>e (little yaw*) little owl yawned and stretched her wings.</p> <p>e good evening everyone she said.</p> <p>e but there was no one around.</p> <p>e I wish I had woke up earlier.</p> <p>e (the other) the other owls have all gone and I have no one to play with.</p> <p>e little owl (spreaded her) spread her wings and flew off into the night sky.</p> <p>e far below, little owl saw a house.</p> <p>e I might find a playmate there, she thought.</p> <p>e she swooped down (onto the windowsill) onto a windowsill and tapped on the glass with her beak.</p> <p>e the sound of the taps woke up tom.</p> <p>e what do you want he asked sleepily as he opened the window.</p> <p>e come out and play with me, said little owl.</p> <p>e I'm much too sleepy.</p> <p>e it's in the middle of the night.</p> <p>e come back tomorrow afternoon.</p> <p>e we can play then.</p> <p>e how can I wake up in the day, said little owl.</p>	<p>e the sleepy owl.</p> <p>e are you sleepy today [ttl]?</p> <p>e did you sleep good last night [ttl]?</p> <p>e mommy didn't [obc].</p> <p>e I'm still sleepy [obc].</p> <p>e it says little owl lived deep in the woods [tr].</p> <p>e all day long she perched on a branch sound asleep [tr].</p> <p>e do you know anybody that sleeps during the day [ttl]?</p> <p>c (uh) a owl.</p> <p>e okay [obc].</p> <p>e (and what d*) what are those owls called [obc]?</p> <p>c uhm.</p> <p>e the same thing as an opossum [obc].</p> <p>e what is it called [obc]?</p> <p>c nocturnal.</p> <p>e nocturnal right [obc].</p> <p>e okay [obc].</p> <p>e do you see the word sound on this page [rp]?</p> <p>e okay [obc].</p> <p>e that's pretty good [obc].</p> <p>e okay [obc].</p> <p>e each evening as daylight faded she woke up [tr].</p> <p>e she did not find getting up easy [tr].</p> <p>e she was a bit of a sleepyhead [tr].</p> <p>e are you a bit of a sleepyhead [ttl]?</p> <p>e do you get up easily [ttl]?</p> <p>e no [obc].</p> <p>e that's what I thought [obc].</p> <p>e okay [obc].</p> <p>e what would you think (uhm if we put uh where I'm looking) if we put a j in front of this what would that be [rp]?</p> <p>e you know what word that would be [rp]?</p> <p>c joke.</p> <p>e that's a o [rp].</p> <p>e joke [rp].</p> <p>c joke.</p> <p>e like you telling a joke [obc].</p>

<p>e I wake up only at night.  e take my alarm clock.  e as soon as you hear it go off fly straight over here.  e little owl wondered how (the mental contra*) the metal contraption could help her.  e but she picked it up in her claws and flew home.  e back on her branch, little owl set the alarm clock down beside her.  e by now it was day so she soon fell asleep.  e a terrifying noise woke her.  e it almost made her fall off the branch.  e the noisy yellow contraption rang and shook as though it would never stop.  e the noise woke every owl in the woods.  e what's the matter they shouted?  e who's making that horrible noise?  e owls hate being disturbed in the middle of the night.  e (uhm) that's a lot of owls [obc].  e little owl tried to stretch her wings.  e but she was too tired and the sunlight hurt her eyes.  e great tears fell down onto her feathers.  e her aunt tried to comfort her.  e don't cry she said.  e if you get up in time tonight (we can) you can play with us.  e in his home, tom was waiting for little owl.  e what had happened to his new friend?  e why hadn't she come?  e be sensible tom, his mother says.  e owls sleep by day and you sleep at (now) night.  e so how can the two of you play together?  e why not finish painting your kite instead of moping about?  e so tom got out of his paint box and painted an owl face on his kite.  e (then he and his friends bo*) then he and his friend bob played with it all afternoon.  e now tom had his own owl to play with and what's more his owl could fly just like his little friend little owl.  e that evening little owl woke up earlier and got up quicker than ever before.  e she had to take the alarm clock back to tom.  e near his house she found the two of the boys flying the kite.</p>	<p>e uhhuh [obc].  e little owl yawned and stretched her wings [tr].  e good evening everyone she said [tr].  e but there was no one around [tr].  e she wished she had woken up earlier [tr].  e the other owls have all gone and I have no one to play with [tr].  e who does that sound like [ttl]?  e that you have no one to play with [ttl].  e okay [obc].  e little owl spread her wings and flew off into the night [tr].  e (so where do) where do you think she's going [int]?  c to go find a friend.  e uhhuh [obc].  e you think she go find one [int]?  e far below, little owl saw a house [tr].  e I might find a playmate there, she thought [tr].  e you know what a playmate is [obc]?  c what?  e someone who plays with you instead of a friend you can call them a playmate [obc].  e like elle is a playmate of yours [ttl].  e she swooped down into the windowsill and tapped on the glass with her beak [tr].  e can you point to her beak [obc]?  e uhhuh [obc].  e you think somebody's gonna come [int]?  e would you be afraid if you went to the window and a owl was on your window [ttl]?  e you wouldn't be [obc]?  e I would be [obc].  e the sound of the taps woke tom [tr].  e what do you want he said sleepily as he opened the window [tr].  e come out and play with me, said little owl [tr].  e I'm much too sleepy [tr].  e it's in the middle of the night [tr].  e come back tomorrow afternoon [tr].  e we can play then [tr].  e how can I wake up in the day, said little owl [tr].  e (I woke up on*) I wake up only at night [tr].  e take my alarm clock [tr].  e as soon as you hear it go off (fly here) fly straight over here [tr].  e where is the clock [obc]?  e uhhuh [obc].</p>
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<p>e she saw the picture of herself that tom had painted on it.</p> <p>e how nice!</p> <p>e time for bed, tom's mother called.</p> <p>e tom waved to little owl as she flew away.</p> <p>e he is still my friend even though we can't play together, thought little owl.</p> <p>e and back home in the woods all the owls were awake and (playing) waiting to play with her.</p> <p>e what you think [int]?</p> <p>e huh [obc]?</p> <p>e what do you think mary katherine [int]?</p> <p>e huh [obc]?</p> <p>e I think that was cute [obc].</p> <p>e I need to look and see if I can find that one [obc].</p> <p>=caregiver switches to the second book.</p> <p>e you wanna read this one [obc]?</p> <p>c no.</p> <p>e okay [obc].</p> <p>e what do you think this one is about [int]?</p> <p>e what's that [obc]?</p> <p>e what it look like [obc]?</p> <p>c a pig.</p> <p>e look like a pig [obc].</p> <p>e charming opal.</p> <p>e it looks like a olivia book [obc].</p> <p>e in july puddle's little cousin opal came to (woodcock pocket for) woodcock pocket for a holiday.</p> <p>e so they are pigs [obc].</p> <p>e on her first day, toot and puddle took opal for a long walk in the sparkling woods.</p> <p>e the three of them played with the new purple ball.</p> <p>e she smelled every flower (in the) in puddle's garden.</p> <p>e that evening they had a cookout with corn on the cob and watermelon.</p> <p>e when puddle was tucking opal into bed she said (I love you to come)I love to come to woodcock pocket.</p> <p>e we love to have you here said puddle.</p> <p>e he added it looks like you're going to lose that tooth pretty soon.</p> <p>e I know opal said proudly.</p> <p>e I can hardly wait.</p> <p>e you see the tooth [obc]?</p> <p>e that little bitty tooth [obc].</p>	<p>e little owl wondered how the metal contraption could help her [tr].</p> <p>e but she picked it up with her claws and flew home [tr].</p> <p>e you know what the word contraption means [obc]?</p> <p>e contraption is like (a) a vague name for some kind of mechanical tool [obc].</p> <p>e okay you ready [obc]?</p> <p>e back on her branch, little owl set the alarm clock down beside her [tr].</p> <p>e by now it was day so soon she fell asleep [tr].</p> <p>e a terrifying noise woke her [tr].</p> <p>e it almost made her fall off her branch [tr].</p> <p>e the noisy yellow contraption rang and shook as though it would never stop [tr].</p> <p>e the noise woke every owl in the woods [tr].</p> <p>e what's the matter they shouted [tr]?</p> <p>e who's making that horrible noise [tr]?</p> <p>e owls hate being disturbed in the middle of the day [tr].</p> <p>e do you ever hear a alarm clock when it go off in the morning [ttl]?</p> <p>c no.</p> <p>e (uhm) well they're alarm clock woke all of these owls [obc].</p> <p>e little owl tried to (str*) stretch her wings [tr].</p> <p>e but she was too tired and the sunlight hurt her eyes [tr].</p> <p>e great tears fell onto her feathers [tr].</p> <p>e her aunt tried to comfort her [tr].</p> <p>e don't cry she said [tr].</p> <p>e if you get up in time tonight you can play with us [tr].</p> <p>e isn't that nice of her aunt [obc]?</p> <p>e does your aunt marion ever tell you you can play with her [ttl]?</p> <p>e huh [obc]?</p> <p>e huh [obc]?</p> <p>e okay [obc].</p> <p>e you think tom is sad [int]?</p> <p>e why do you think he's sad [int]?</p> <p>c because the owl didn't come.</p> <p>e uhuh [obc].</p> <p>e in his home, tom was waiting for little owl [tr].</p> <p>e what had happened to his friend [tr]?</p> <p>e why didn't she come [tr]?</p>
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<p>e at breakfast opal said, look toot, my tooth is so wobbly.</p> <p>e would you like me to help it come out, tooth asked.</p> <p>e opal said I want it to come out all by itself.</p> <p>e so what do you think they were going to do with this string [int]?</p> <p>e see it's on the door [obc].</p> <p>e what you think [int]?</p> <p>c tie it on her tooth?</p> <p>e and do what with it [int]?</p> <p>c take it out.</p> <p>e what if I would have done your tooth like that when it fell out [ttl]?</p> <p>e they picked big beautiful strawberries in the morning.</p> <p>e I don't think that tooth can get any looser opal, puddle said.</p> <p>e it might fall out today, opal said laughing.</p> <p>e right during my vacation at woodcock pocket.</p> <p>e in the afternoon they set off for pocket pond.</p> <p>e last one in is a rotten egg, toot called somersaulting into the water.</p> <p>e puddle made sure (opal) opal went second.</p> <p>e all at once puddle noticed that opal looked slightly (diff* uhm) different.</p> <p>e holy moly, he said.</p> <p>e your tooth!</p> <p>e yes (opal) opal's lost tooth had fallen out at last.</p> <p>e but where is it, opal asked looking anxiously at the ground.</p> <p>e she was bravely trying not to cry.</p> <p>e why aren't you upset, puddle asked.</p> <p>e you've (been hoping for your tooth) been hoping for your tooth to come out.</p> <p>e but where is it, opal repeated.</p> <p>e I have to put it under my pillow tonight.</p> <p>e you do asked toot.</p> <p>e so the tooth fairy will come she explained.</p> <p>e (I) I see said puddle.</p> <p>e we will have to find that loose tooth.</p> <p>e that lost tooth, toot said.</p> <p>e they searched everywhere along the path back at the house and all around the pond but opal's tooth (seems to be have) seemed to have vanished.</p> <p>e it must have come out while you were in the water, puddle decided.</p>	<p>e be sensible tom, (his mother) his mother said [tr].</p> <p>e owls sleep by the day you sleep at night [tr].</p> <p>e so how can the two of you play together [tr]?</p> <p>e why not finish painting your kite instead of moping about [tr]?</p> <p>e so tom got out his paintbox and painted (an owl on) an owl face on his kite [tr].</p> <p>e then he and his friend bob played with it all afternoon [tr].</p> <p>e (when tom had his own wait) now tom had his own owl to play with and what's more his owl could fly just like his friend little owl [tr].</p> <p>e have you ever made a kite [ttl]?</p> <p>e you didn't make a kite in preschool [ttl]?</p> <p>e you ever flown a kite [ttl]?</p> <p>c what?</p> <p>e did you ever fly a kite [ttl]?</p> <p>e xxx.</p> <p>e that evening&gt;</p> <p>e you gotta get up [obc].</p> <p>e that evening little owl woke up earlier and got up quicker than ever before [tr].</p> <p>e she had take the alarm clock back to tom [tr].</p> <p>e near his house she found the two little boys flying the kite [tr].</p> <p>e she saw the picture of herself that tom had painted on it [tr].</p> <p>e how nice [tr]!</p> <p>e time for bed, (tom mothers) tom's mother called [tr].</p> <p>e tom waved to little owl as she flew away [tr].</p> <p>e he is still my friend even though we can't play together, thought little owl [tr].</p> <p>e do you think that's nice [obc]?</p> <p>e you think tom was being nice by painting (his uhm) her face on his kite [obc]?</p> <p>e you think that made her feel better [int]?</p> <p>e no [obc]?</p> <p>e it did [obc]?</p> <p>e back at home in the woods all the owls were awake and waiting to play with her [tr].</p> <p>e what do you think [int]?</p> <p>c (uhm).</p> <p>e huh [obc]?</p> <p>e the end [obc].</p> <p>c (uh) good.</p> <p>e good [obc].</p>
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<p>e then it's gone forever his little cousin said sadly.  e maybe not shouted toot.  e what is that [obc]?  e what are those [obc]?  c pig.  e those are goggles just like when you go swimming in the summer [ttl].  e you see they're going underwater looking for it [obc]?  e low and behold on his third dive, toot spotted opal's white tooth on the sandy bottom of pocket pond.  e as puddle tucked his little cousin into bed that night she carefully placed her tooth under her pillow.  e now the tooth fairy will come while I'm at woodcock pocket she said just as I'd hoped.  e sweet dreams said puddle.  e but he was worried.  e what's the matter puds toot asked.  e do you think the tooth fairy comes to woodcock pocket?  e I'm not sure (toot) toot said.  e maybe.  e but what if she doesn't?  e opal will be so unhappy.  e puddle devised a plan.  e they would stay awake and make sure that the tooth fairy visit opal's bedroom.  e and if she didn't come to collect the precious tooth and leave the shiny new quarter in its place, puddle would do the task himself.  e I will be the tooth fairy, he declared.  e how do you be the tooth fairy, toot asked.  e an hour later puddle returned to the living room.  e I am the tooth fairy, he announced.  e I am believable.  e quite believable, toot (uhm) told him.  e now let's turn out the lights and wait (for t* uhm) for the tooth fairy to arrive, puddle said.  e oh no, said puddle.  e (we both fell uh a*) we both fell asleep!  e did you hear anything during the night, toot asked.  e not a sound, puddle said.  e it's too late for me to be the tooth fairy.  e they heard opal calling from the other room.  e I'm afraid it's too late, said toot.</p>	<p>e you wanna sit up [obc]?  c I can't because^  e that's okay [obc].  =caregiver switches to the second book.  e charming opal.  e in july puddle's little cousin opal came to woodcock pocket for a holiday [tr].  e what is july [obc]?  e is it a day of the week or a month in a year [obc]?  c a day of the week.  e it's in a month of the year [obc].  e it's in the summer when we swim [ttl].  e (and she) puddle's cousin is opal [obc].  e can you name two of your cousins [ttl]?  e who are your cousins (huh) [ttl]?  e p2 [ttl].  c k2.  e and [ttl]?  c isiah.  e uhuh [obc].  c and austin.  e what do you think they gonna do all summer [int]?  c (uhm).  e play [obc]?  c xxx.  e &lt;on her day&gt;^  c go swimming.  e uhuh [obc].  e on her first day, toot and puddle took opal for a long walk in the sparkling woods [tr].  e the three of them played with the new purple ball [tr].  e (she smiled) she smelled every flower in puddle's garden [tr].  e that evening they had a cookout with corn on the cob and watermelon [tr].  e when puddle was (tuck) tucking opal into bed she said I love to come to woodcock pocket [tr].  e we love to have you here said puddle [tr].  e he added (it looks like we're going to) it looks like you're gonna lose (a tooth) that tooth pretty soon [tr].  e I know opal said proudly [tr].  e I can hardly wait [tr].  e remember when you were gonna lose your tooth [ttl]?  e were you excited about losing it [ttl]?</p>
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<p>e toot and puddle stepped nervously into the guest bedroom.</p> <p>e good morning opal, they said together.</p> <p>e I was thinking, puddle began, if the tooth fairy didn't come it is because she didn't know exactly where woodcock pocket was after all.</p> <p>e and I was thinking said toot, if the tooth fairy didn't come it would just be as nice to keep (this) that wonderful tooth of yours for yourself.</p> <p>e but guess what, opal said.</p> <p>e the tooth fairy did come!</p> <p>e grinning happily she held out the shiny new quarter for toot and puddle to see.</p> <p>e what you think [int]?</p> <p>c cute.</p> <p>e cute [obc].</p> <p>e I thought it was cute too [obc].</p> <p>e you're so uneventful [obc].</p> <p>=caregiver switches to next book.</p> <p>e groundhog stays up late.</p> <p>e groundhog stays up late.</p> <p>e (groundhog) groundhog was not the kind of groundhog who liked to hibernate.</p> <p>e to him making a winter burrow was boring.</p> <p>e gathering and storing food was boring.</p> <p>e (all and all) most of all sleeping and all winter long was boring.</p> <p>e instead of preparing for the winter he liked to play hide and seek with the rabbits (the possums) well possum with the opossum and tag with the bumblebees.</p> <p>e he was busy [obc].</p> <p>e why do you even bother to hibernate chattered squirrel.</p> <p>e (you're never re*) you're never ready when winter comes.</p> <p>e you should be looking for nuts and seeds right now.</p> <p>e I don't think I'll hibernate this year, said groundhog.</p> <p>e but you have to, (said badger) the badger.</p> <p>e how else will you wake up (in february) on february second and look at your shadow so we'll know when spring is coming?</p> <p>e I don't need to hibernate to do that, said groundhog.</p> <p>e bear shook his saggy head.</p> <p>e well don't expect us to give you shelter when it</p>	<p>e uhhuh [obc].</p> <p>c where's that red stuff?</p> <p>e it's part of the floor [obc].</p> <p>e what rhymes with tooth [rp]?</p> <p>c that's tooth?</p> <p>e yeah [obc].</p> <p>c tooth.</p> <p>e can you think of a word that might rhyme with it [rp]?</p> <p>c tooth dooth.</p> <p>e dooth [obc].</p> <p>e I don't know what dooth mean [obc].</p> <p>e okay [obc].</p> <p>e (at breakf*) breakfast opal said, look tooth, my tooth is so wobbly [tr].</p> <p>e you think it hurts [obc]?</p> <p>e her tooth being wobbly is it hard to eat [obc]?</p> <p>e ( I would like to I would like I would like you) would you like to help it come out, toot asked [tr].</p> <p>e opal said I want it to come out all by itself [tr].</p> <p>e what do you think they were gonna do with that string [int]?</p> <p>c (uhm) they were go tie it to the door (and then) and then xx.</p> <p>e uhhuh [obc].</p> <p>e they picked big beautiful strawberries in the morning [tr].</p> <p>e I don't think that tooth can get any looser opal, puddle said [tr].</p> <p>e it might fall out today, opal said laughing [tr].</p> <p>e right during my vacation at woodcock pocket [tr].</p> <p>e can you find the word fall [rp]?</p> <p>c which page it's on?</p> <p>c this page?</p> <p>e uhhuh [obc].</p> <p>e uhhuh [obc].</p> <p>e in the afternoon they set off for pocket pond [tr].</p> <p>e last one in is a rotten egg, toot called somersaulting into the water [tr].</p> <p>e don't you and your cousins play that all the time [ttl]?</p> <p>e last one in is a rotten egg [obc]?</p> <p>e you don't [obc]?</p> <p>e okay [obc].</p> <p>e (what do you) how do you think puddle is getting in the water opal [obc]?</p> <p>c because^</p>
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<p>snows.</p> <p>e or food when you get hungry said the squirrel.</p> <p>e or warmth when you get cold said the badger.</p> <p>e finally winter came.</p> <p>e groundhog friends curled up in their homes for the long winter naps.</p> <p>e but not groundhog.</p> <p>e he stayed outside.</p> <p>e soon it began to snow.</p> <p>e wow snow, yelled (the uhm) the groundhog.</p> <p>e time to play!</p> <p>e a hare ran by.</p> <p>e wanna make a snowman, said the groundhog.</p> <p>e no silly said the hare.</p> <p>e I'm racing to my woodpile until the storm is over.</p> <p>e weasel ran by.</p> <p>e want to have a snowball fight, asked groundhog.</p> <p>e forget it said weasel.</p> <p>e I'm scampering to my hole where it's warm.</p> <p>e fox ran by.</p> <p>e wanna build (a snowman fort) a snow fort, said groundhog.</p> <p>e not now, said fox.</p> <p>e I'm running to my den to get dry.</p> <p>e what a bunch of stick-in-the muds, said groundhog.</p> <p>e as the weeks passed, groundhog built a snowman, threw snowballs at the trees, and made a snow fort.</p> <p>e but groundhog was getting very hungry.</p> <p>e and very thin which (makes) was making him very cold.</p> <p>e and most of all, he was getting very lonely.</p> <p>e so one day just before christmas, he padded over to the badger's burrow.</p> <p>e may I come in he called?</p> <p>e badger opened one eye.</p> <p>e no I'm too busy sleeping.</p> <p>=caregiver makes sleeping noise as the book indicates.</p> <p>e groundhog scurried to the squirrel's hole.</p> <p>e hello squirrel he said.</p> <p>e how about sharing a few nuts.</p> <p>e squirrel twitched his tail.</p> <p>e not now, he said.</p> <p>e I'm taking a nap.</p> <p>e come back in the spring.</p> <p>e groundhog finally burrowed through the snow</p>	<p>e is she just running and jumping in or she swung on the rope and jumped in [obc]?</p> <p>c she swung on the rope and then let go.</p> <p>e puddle made sure opal went second [tr].</p> <p>e look she's holding her nose [obc].</p> <p>e you see [obc]?</p> <p>c why?</p> <p>e because when you jump into water you don't want the water to go up your nose so you hold your nose pinch it [obc].</p> <p>e all at once puddle noticed that opal looked slightly different [tr].</p> <p>e holy moly, he said [tr].</p> <p>e your tooth [tr]!</p> <p>e yes (opal) opal's loose tooth had fallen out at last [tr].</p> <p>e but where is it, opal asked looking anxiously at the ground [tr].</p> <p>e she was bravely trying not to cry [tr].</p> <p>e why are you upset, puddle asked [tr].</p> <p>e you've been hoping for (that) your tooth to come out [tr].</p> <p>e but where is it, opal repeated [tr].</p> <p>e I have to put it under my pillow tonight [tr].</p> <p>e you do asked toot [tr].</p> <p>e so the tooth fairy will come she explained [tr].</p> <p>e I see said puddle [tr].</p> <p>e we'll have to find that loose tooth [tr].</p> <p>e that lost tooth, toot said [tr].</p> <p>e where do you think the tooth is [int]?</p> <p>c in the water.</p> <p>e they searched everywhere along the path and back at the house and (all around) all around the pond but opal's tooth seemed to have vanished [tr].</p> <p>e it must have come out while you were in the water, puddle decided [tr].</p> <p>e then it's gone forever his little cousin said sadly [tr].</p> <p>e you know what the word vanished mean [obc]?</p> <p>e you see vanished right here [obc]?</p> <p>c yeah.</p> <p>e what does that mean [obc]?</p> <p>c that it's lost.</p> <p>e well it says but opal's tooth seemed to have vanished [tr].</p> <p>e it means disappeared [obc].</p> <p>e maybe not shouted toot [tr].</p>
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<p>             (to bear) to the bear's cave.              e wake up bear.              e it's me groundhog he called.              e bear turned over and wiggled one ear.              e go away he growled.              e I warned you not to bother me.              e poor groundhog.              e so hungry.              e so cold.              e so lonely.              e all night long he stayed awake.              e but that night he was shivered and shook and he began to get an idea.              e an idea that would put food in his belly and give him friends to play with.              e a few days later, the sun came out and the snow started to melt.              e groundhog climbed to the top of the hollow hill and (pointed to his nose) pointed his nose to the sky.              e he opened his mouth and yelled spring has come early!              e let's celebrate!              e the animals poked their heads out of their dens.              e they wiggled out of their burrows.              e they crawled out of their holes.              e how wonderful to have an early spring.              e even though it was cold and there was patches of snow on the ground, spring was on its way.              e they gathered food they had stored in the fall and carried it outside.              e groundhog was waiting for them.              e happy spring he lied.              e (I didn't see my shadow so spring is coming) I didn't see my shadow so spring is coming early.              e let's eat.              e hooray yelled bear.              e hooray shouted the other animals.              e they laid all their food on a big stump.              e groundhog (drove over) dove over to the dry berries and nuts and seeds.              e so everyone was eating and celebrating.              e that is until something unexpected started to happen.              e a snowflake fell from the sky.              e and then another.              e and another.              e and soon the snow was swirling around them like           </p>	<p>             e low and behold on his third dive, (toot) toot spotted opal's white tooth on the sandy bottom of pocket pond [tr].              e see the tooth [obc]?              e as puddle tucked his little cousin into bed that night she carefully placed her tooth under her pillow [tr].              e now the (tooth tairy) tooth fairy will come while I'm at woodcock pocket she said just as I'd hoped [tr].              e sweet dreams said puddle [tr].              c what's the tooth fairy doing?              e what's the tooth fairy doing [obc]?              e what do you think the tooth fairy's doing [int]?              c xxx.              e well you can tell that opal is thinking about the tooth fairy [obc].              e that's what her dream was about [obc].              e why does the tooth fairy come when you lose a tooth [obc]?              e what does he give [obc]?              c money.              e uhhuh [obc].              e but he was worried [tr].              e what's the matter puds toot asked [tr].              e do you think the tooth fairy comes to woodcock pocket [tr]?              e I'm not sure toot said [tr].              e maybe [tr].              e but what if she (doesn*) doesn't [tr]?              e opal will be so unhappy [tr].              e puddle devised a plan [tr].              e they would stay awake and make sure the tooth fairy visit opal's room [tr].              e and if she didn't come to collect the precious tooth and leave a shiny new quarter in its place, puddle would do the task himself [tr].              e I will be the tooth fairy, he declared [tr].              e (how do you be the) how do you be the tooth fairy, toot asked [tr].              e does toot look confused [obc]?              c yeah.              e uhhuh [obc].              e how do you think he's gonna be the tooth fairy [int]?              c he needs a wand.              e yeah [obc].              e he needs a wand but what did he run and do           </p>
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<p>tiny stars.  e I thought spring was coming early this year,  complained squirrel.  e I'm getting so very cold and very tired all of a  sudden, moaned the bear.  e I need to take a nap, said the badger.  e squirrel skittered back to his hole and looked at  his calendar.  e it was only january second.  e groundhog played a trick on us he yelled.  e it is not february second.  e groundhog day is a whole month away.  e what a nasty trick cried the animals.  e groundhog should be punished.  e but groundhog didn't hear them.  e he was so sleepy after his big meal that he  crawled into his burrow and had fallen asleep.  e and he slept and slept right until february second  when his eyes (poked) popped open for  groundhog's day.  e he stepped out into the fresh air.  e and the snow had melted, the birds were singing,  and the buttercup dots the woods with colors.  e it's spring said groundhog.  e but when he looked down at the ground, he saw  his shadow.  e (it looked like) it looked a little strange it was a  funny color but it had to be his.  e nuts he said.  e six more weeks (of sum*) of winter.  e and he returned to his barrows and went back to  sleep.  e the other animals came out of their hiding  places.  e our trick worked said the badger.  e that shadow we (painted for) painted sure fooled  groundhog.  e see here [obc].  e is that where they painted it [obc]?  e while groundhog (slept) slept through the spring,  his friends enjoyed the sun warming their furs and  the breezes ruffling (their) through the trees.  e (but groundhog learned his lesson) but did  groundhog learn his lesson?  e no!  e so that mean he didn't go to sleep the next  winter [obc].  e what you think [int]?</p>	<p>[obc]?  c xxx.  e he didn't put on a costume like a fairy [obc]?  e you don't' see the costume with the wings the  hangers on the wings [obc]?  c yeah.  e you see it now [obc]?  e an hour later puddle returned into the living  room [tr].  e I am the tooth fairy, he announced [tr].  e (I) am I believable [tr]?  e quite believable, toot told him [tr].  e now let's turn out the lights and wait for the  tooth fairy to arrive, puddle said [tr].  e oh no, said puddle [tr].  e we both fell asleep [tr]!  e oh no said puddle [tr].  e we both fell asleep [tr].  e did you hear anything during the night, toot  asked [tr].  e not a sound puddle [tr].  e (it's) is it too late for me to be the tooth fairy [tr].  e they heard opal calling them (from her) from the  other room [tr].  e I'm afraid it is too late, said toot [tr].  e toot and puddle stepped nervously into the  guest room [tr].  e good morning opal, they said together [tr].  e I was thinking, puddle began, if the tooth fairy  didn't come it's because she didn't know exactly  where woodcock pocket was after all.  e and I was thinking said toot, if the tooth fairy  didn't come it would be just as nice to keep that  wonderful tooth of yours for yourself.  e but guess what, opal said [tr].  e the tooth fairy did come [tr]!  e (grinningly) grinning happily she held out her  shiny new quarter for toot and puddle to see [tr].  e what do you think she's gonna buy with that  quarter [int]?  c (uh).  e what would you buy with your quarter if you had  one [ttl]?  c go to the dollar store and get stickers.  e get what stickers [obc]?  e okay [obc].  =child asks to go to the bathroom and camera  turned off until time for last book.</p>
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<p>c cute.  e cute [obc].  e that's all you have to say [obc]?  e alrighly [obc].  e you wanna try to read any of them yourself [obc]?  e alright [obc].</p>	<p>e it says groundhog stays up late.  e how do you think that makes her feel the next day when she stays up late or he stays up late [int]?  e how do you feel when you stay up late and you don't get enough sleep when I wake you up in the morning [ttl]?  c (uh).  e are you sleepy [ttl]?  c I don't wanna get in the car.  c I just wanna go back to sleep.  e yeah [obc].  e groundhog stays up late [tr].  e groundhog was not the kind of groundhog who liked to hibernate [tr].  e you know what hibernate means [obc]?  e remember we talked about hibernation [obc]?  e you remember what it means [obc]?  c x.  e that they sleep all winter long and then in the spring they wake up [obc].  e remember that [obc]?  e bears hibernate during the winter [obc].  e okay [obc].  e to him making a winter burrow was boring [tr].  e gathering and sorting food was boring [tr].  e (and almost all of) and most of all sleeping all winter long was boring [tr].  e instead of (prepa*) preparing for winter he liked to play hide and seek with the rabbits [tr].  e how many times did they say boring [rp]?  c is that what boring looks like?  e uhhuh boring [obc].  c boring.  c boring.  e &lt;boring&gt; [rp].  c &lt;boring&gt;.  e so how many times is that [rp]?  c one.  c three.  e uhhuh [obc].  e so instead of preparing for winter he like to play hide and seek with the rabbits (possums) he liked to play possum with opossums and tag with the bumblebees [tr].  e you ever played tag [ttl]?  c yeah.  e you do [obc]?</p>
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	<p>e you know what playing possum mean [obc]?  e what does that mean [obc]?  c (uhm)^  e grandmother always say you're (pay) playing possum with her [ttl].  e you're playing like you're sleep [obc]?  e huh [obc]?  c uhuh.  e that's what that mean [obc].  e see he playing like he sleep [obc].  e why do you even bother to hibernate (chattered) chattered squirrel [tr].  e (you) you're never (real) ready when winter comes [tr].  e you should be looking for nuts and seeds right now [tr].  e I don't think I'll hibernate this year, said groundhog [tr].  e but you have to, said badger [tr].  e how else will you wake up on february second and (look out look a) look at your shadow so you'll know when spring is coming [tr]?  e I don't need to hibernate to do that, said groundhog [tr].  e you think he needs to (uhm) hibernate to wake up on february second (huh) [int]?  e you do [obc]?  e how many times they say hibernate on this page on these two pages [rp]?  c hibernate.  e that's one [obc].  c (uh) hibernate.  e uhuh [obc].  c hibernate.  e uhuh [obc].  e okay [obc].  e what if we put a b in front of this word what would that make that word [rp]?  c this one &lt;mark&gt;.  e &lt;uhuh&gt; [obc].  e a b in front of that [rp].  c dirk.  e a b buh buh [rp].  c (y*) and then u &lt;and u&gt;.  e uhhu [obc].  e a b &lt;and then a&gt; a then a k then a e [rp].  c &lt;I don't know which&gt;.  e instead of wake it a be buh [rp].</p>
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	<p> c buck.  e bake [rp].  c bake.  e bear shook his shaggy head [tr].  e well don't expect us to give you shelter when it  snows [tr].  e or food when you get hungry said squirrel [tr].  e or warmth when you get cold said badger [tr].  e why do you think his friends are being so mean  to him [int]?  c because he needs to hibernate.  e uhuh [obc].  e (they're) and see he's busy playing while they're  (connect) collecting their nuts and seeds [obc].  e finally winter came [tr].  e groundhog's friends curled up in their homes for  the long winter naps [tr].  e but not groundhog [tr].  e he stayed outside [tr].  e soon it began to snow [tr].  e wow snow, yelled groundhog [tr].  e time to play [tr]!  e (he ran uh) hare ran by [tr].  e wanna make a snowman asked groundhog [tr].  e no silly said the hare [tr].  e i'm racing to my woodpile (under the storm)  until the storm's over [tr].  e where's the hare [obc]?  e where's the hare [obc]?  e uhuh [obc].  e a rabbit and a hare are pretty much the same  thing [obc].  e weasel ran by [tr].  e wanna have a snow fight, asked groundhog [tr].  e forget it said weasel [tr].  e i'm scampering to my hole where it's warm [tr].  e you think he's cold [obc]?  e you don't think they cold in all that snow [obc]?  e were you &lt;cold&gt; when you played in the snow  [ttl]?  c &lt;but&gt;.  c uhuh.  e (but in there) but he's cold and he's cold and the  rabbit's cold.  e but he's not cold why [obc]?  c (because it's) because he wants to play in the  snow.  e and he has mittens on and his little scarf around </p>
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	<p>his neck &lt;that keeps him warm&gt; [obc].</p> <p>c &lt;but he needs a coat&gt;.</p> <p>e yeah he needs a coat on [obc].</p> <p>e fox ran by [tr].</p> <p>e wanna build a snow fort asked groundhog [tr].</p> <p>e not now said fox [tr].</p> <p>e I'm running to my den to get dry [tr].</p> <p>e so you think snow is wet [obc]?</p> <p>e is it wet too [obc]?</p> <p>e it is wet [obc].</p> <p>e what a bunch of stick-in-the muds, said groundhog [tr].</p> <p>e as the weeks passed, groundhog built a snowman, threw snowballs at the trees, and made a snow fort [tr].</p> <p>e so you think he had fun by himself [int]?</p> <p>e you think he had fun playing by himself [int]?</p> <p>e do you have fun playing by yourself [ttl]?</p> <p>e but groundhog was getting very hungry [tr].</p> <p>e and very thin which was making him very cold [tr].</p> <p>e (and almost) and most of all, he was getting very lonely [tr].</p> <p>e so one day just before christmas, he padded over to (bur*) badger's burrow [tr].</p> <p>e may I come in he called [tr]?</p> <p>e badger opened one eye [tr].</p> <p>e no I'm too busy sleeping [tr].</p> <p>e do you see the word christmas [rp]?</p> <p>c christmas.</p> <p>e uhuh [obc].</p> <p>c on which page?</p> <p>e on this page [obc].</p> <p>e uhuh [obc].</p> <p>e do you know what season christmas come in [obc]?</p> <p>e is it spring (win*)^</p> <p>c december.</p> <p>e it comes in december but is that spring fall summer or winter [obc]?</p> <p>c winter.</p> <p>e winter [obc].</p> <p>e groundhog scurried to squirrel's hole [tr].</p> <p>e (hey) hello squirrel he said [tr].</p> <p>e how about sharing a few nuts [tr].</p> <p>e squirrel twitched his tail [tr].</p> <p>e not now he said [tr].</p> <p>e I'm taking a nap [tr].</p>
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	<p>e come back in the spring [tr].</p> <p>e does he look warm in his bed [obc]? c yeah.</p> <p>e so what do you think groundhog is gonna do now that he's hungry and cold and lonely [int]? c hibernate and he's gonna go to x.</p> <p>e uhhuh [obc].</p> <p>e groundhog finally burrowed through the snow to bear's cave [tr].</p> <p>e wake up bear [tr].</p> <p>e it's me groundhog he called [tr].</p> <p>e bear turned over and wiggled one ear [tr].</p> <p>e go away he growled [tr].</p> <p>e I warned you not to bother me.</p> <p>e you think the bear like to be bothered [int]? c no.</p> <p>e no [obc].</p> <p>e poor groundhog [tr].</p> <p>e so hungry [tr].</p> <p>e so cold [tr].</p> <p>e so lonely [tr].</p> <p>e all night long he stayed awake [tr].</p> <p>e but that night as he shivered and shook he begin to get an idea [tr].</p> <p>e you know what a idea is [obc]? c what?</p> <p>e it's when all of sudden you know (uh) I know [obc].</p> <p>e that's an idea [obc].</p> <p>e remember doing that [ttl]? e I got a idea (huh) [obc]? e okay [obc].</p> <p>e an idea that will put food in his belly and give him friends to play with [tr].</p> <p>e (a new day) a few days later, the sun came out and the snow started to melt [tr].</p> <p>e groundhog climbed to the top of the (holly) hollow hill and pointed his nose to the sky [tr].</p> <p>e he opened his mouth and yelled spring's (coming) come early [tr]!</p> <p>e let's celebrate [tr]!</p> <p>e you think was nice to tell a story [obc]? e huh [obc]? e no [obc].</p> <p>e it's not nice to tell a story [obc].</p> <p>e the animals poked their heads out of their dens [tr].</p> <p>e they wiggled out of their burrows [tr].</p>
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	<p>e they crawled out of their holes [tr].</p> <p>e how wonderful to have an early spring [tr].</p> <p>e even though it was cold and there was patches of snow on the ground, spring was on its way [tr].</p> <p>e they gathered the food they had stored in the fall and carried it outside [tr].</p> <p>e what do you think they're gonna do bringing all that food outside [int]?</p> <p>e you think they're gonna have a picnic [int]?</p> <p>e you do [obc]?</p> <p>e groundhog was waiting for them [tr].</p> <p>e happy spring he lied [tr].</p> <p>e I didn't see my shadow so spring is coming early [tr].</p> <p>e how many times you see the word spring on this page [rp]?</p> <p>c spring.</p> <p>c spring.</p> <p>e spring [rp].</p> <p>e what rhymes with spring [rp]?</p> <p>c ding.</p> <p>e ding [obc].</p> <p>e (what if) so we would put a what a d in front of the s p r and that'll make it ding [rp]?</p> <p>c yeah.</p> <p>e huh [obc]?</p> <p>c yes.</p> <p>e hooray yelled bear [tr].</p> <p>e hooray shouted the other animals [tr].</p> <p>e they laid all of their food on the big stump [tr].</p> <p>e groundhog (drove) dove into the dried berries and nuts and seeds [tr].</p> <p>e soon everyone was eating and celebrating [tr].</p> <p>e that's it until something unexpected started to happen [tr].</p> <p>e what do you think (was hap*) did happen [int]?</p> <p>c snow.</p> <p>e it started to snow again [obc].</p> <p>e a snowflake fell from the sky [tr].</p> <p>e and then another [tr].</p> <p>e and another [tr].</p> <p>e soon the snow was swirling around them like tiny stars [tr].</p> <p>e you think they're gonna be mad at him [int]?</p> <p>e you do [obc]?</p> <p>e I thought spring was coming early this year, complained squirrel [tr].</p> <p>e I'm getting very cold and very tired all of a</p>
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	<p> sudden, moaned bear [tr].  e I need to take a nap, said badger [tr].  e squirrel skattered back to his hole and looked at his calendar [tr].  e it was only january second [tr].  e groundhog played a trick on us he yelled [tr].  e it's not february second [tr].  e groundhog day is a whole month away [tr].  e what a nasty trick cried the animals [tr].  e groundhog should be punished [tr].  e do you think he should punished [obc]?  e you do [obc]?  e but groundhog didn't hear them [tr].  e he was so sleepy after his big meal that he crawled into his burrow and had fallen fast asleep [tr].  e and he slept and slept right up until february second when his eyes popped open for groundhog day [tr].  e they look angry don't they [int]?  e he stepped out into the fresh air [tr].  e the snow had melted, the birds were singing, the buttercups dotted the woods with color.  e it's spring said groundhog [tr].  e but when he looked down on the ground, he saw his shadow [tr].  e it looked a little strange and it was a funny color but it had to be his [tr].  e nuts he said [tr].  e six more weeks of winter [tr].  e and he returned to his burrow and went back to sleep [tr].  e the other animals came out of their hiding places [tr].  e our trick worked said badger [tr].  e that shadow we painted sure fooled groundhog [tr].  e you think you woulda been fooled (huh) [ttl]?  c uhuh.  e let's see [obc].  e while groundhog slept through the spring, his friends (enjoyed the sun warm) enjoyed the sun warming their furs and the breezes ruffling through the trees [tr].  e but did groundhog learn his lesson [tr]?  e you think he learned his lesson [int]?  c uhuh.  e you think he did [int]? </p>
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	<p>e no!</p> <p>e he did it again that winter [obc].</p> <p>e he didn't learn his lesson [obc].</p> <p>e the &lt;end&gt; [obc].</p> <p>c &lt;wait&gt;.</p> <p>c (does that say) does that say happy new year?</p> <p>e yes [obc].</p> <p>e it sure does [obc].</p> <p>e the end [obc].</p>
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## VITA

Lekeitha Renee' (Hartfield) Morris earned her bachelor's degree in speech-language pathology in May of 2000 from the University of Central Arkansas. She completed her master's degree in speech-language pathology in May of 2002 from the University of Central Arkansas. While at the University of Central Arkansas, Lekeitha completed a thesis entitled *Performance of African American 3<sup>rd</sup> and 4<sup>th</sup> Graders on the Peabody Picture Vocabulary Test:III*. Upon completing her master's degree, Lekeitha worked as a speech-language pathologist at HealthSouth Rehabilitation Hospital in Texarkana, Texas, and it was during her employment at HealthSouth that she earned her Certificate of Clinical Competence in speech-language pathology from the American Speech-Language-Hearing Association in February of 2003. In the fall of 2005, Lekeitha enrolled in the doctoral program in the Department of Communication Disorders at Louisiana State University. While at Louisiana State University, Lekeitha concentrated her studies in child language development and disorders with a specific interest in caregiver training methods and prevention models.